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CONFLICTING DISCOURSES:  
OCCUPATIONAL SEGREGATION  
IN COMPUTER PROGRAMMING

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## **Abstract**

This thesis explores issues round gender and job segregation which emerged during a qualitative study of the different work experiences and attitudes of over fifty female and male computer programmers, in a number of computer software companies and in two internationally renowned manufacturing organizations. The aim of this thesis is to demonstrate the emergence of a sexual division of labour in this occupation and thus illustrate the process of segregation. It explores a qualitative approach to the study of vertical segregation in the computing industry amongst computer programmers. It uses Foucault's concept of discourse to suggest that a number of discourses are productive of gender segregation at work.

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## Chapter One

### SOCIOLOGY OF WOMEN AND PAID WORK

Before the emergence of second wave feminism<sup>1</sup>, sociological studies of work did not use gender as an analytical category and did not see gender and gender relationships as important dimensions of both the way in which employment is structured and the way in which work is experienced (see Brown 1976; Beechey 1983, 1979, 1978, 1977). In comparison with the early 1970s, by the beginning of the 1990s, there is now a vast literature on both women and work and gender at work.

In the 1980s, feminist debates on women's paid employment focused on the inequalities experienced by women in the workplace and demonstrated the type of work women did, both historically and present day. In some senses, for feminist sociologists, this task was made easier than for feminists working in other disciplines by the dramatic increase in the numbers of women, especially married women, who had entered the workplace from the 1960s. The two theoretical frameworks which various feminists drew on in order to comprehend women's place in the labour market is indicative of two dominant strands in sociological analysis: Marxist sociology and mainstream or bourgeois sociology. The greater part of

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<sup>1</sup> The concept of the second wave is used by scholars to distinguish between the early history of feminism which is usually associated with the Suffragette movement and the women's movement which emerged in the 1960s.



work in the area was produced by feminists who drew on Marxist concepts developed from analysis of the capitalist labour process. They utilised terms such as reserve army of labour; the ideology of femininity and masculinity; the concept of patriarchy and linked these with the concepts of reproduction and production. Other feminists, again utilising a concept of patriarchy analysed women's position in employment with reference to notions of a segmented labour market and dual labour market theories, using concepts developed by bourgeois economists rather than sociologists. For both types of analysis of women's work the key theoretical problem is the explanation of the persistence of occupation segregation. A key indicator of the theoretical position taken by these different writers is the extent to which they refer to the highly gender *segregated* or *segmented* nature of the labour market.

Regardless of the theoretical framework adopted by the writers in the field there is now a great deal of knowledge of the types of work that women do, the attitudes and aspirations of women and the extent to which gender influences the labour market. In other words there are a large number of empirical and descriptive accounts of gender and work. But the reason why employment continues to be characterised by a high level of differentiation between women and men is still slippery. Feminist debates about women's paid work and

occupational segregation make assumptions about men's orientation to paid work, domestic work and childrearing which explain occupational segregation as determined by the sexual division of labour in the household and/or by men organising to keep women out of the labour market, or by men keeping the better paid jobs for themselves. A number of writers have provided historical analyses of men's opposition to women at work which strengthened these explanations for gender segregation (see, Witz 1992; Walby 1986; Cockburn 1983; Hartmann 1981). These historical accounts explain the continued persistence of this phenomenon showing that gender segregation whilst not static, still continues to reproduce itself. What links the different arguments in these accounts is the use of patriarchy as a theoretical tool which problematises the attempt to theorise women's position in the labour market in a number of ways.

#### **THE CONCEPT OF PATRIARCHY**

The concept of patriarchy has dominated much of feminist theory and practice since its appearance in the work of Kate Millett in what is now considered her feminist classic *Sexual Politics* (1970). Since then, patriarchy has been used as an analytical tool which explains male dominance and women's subordination and oppression not only present day, in the capitalist mode of production but also historically, across differing epochs and through various social formations. The term



does have another history, and according to one source this is in part an explanation for the weight the concept continues to have in feminist theoretical analysis. As Rosalind Coward's book *Patriarchal Precedents* (1983) explains, the concept appears not only in Marx's analysis of property relations but also in important psychoanalytical accounts of the structuring of the personality and human sexuality. In addition, historical and anthropological accounts of human societies use the concept of patriarchy to account for the empirical differences of power and status between women and men (Coward 1983, p7).

Throughout the 1970s the usefulness of the concept and the role it has played and continues to play in feminist analysis was keenly discussed, and many important theoretical points and inadequacies exposed. The criticisms concentrated on the ahistorical and essentialist nature of the concept. This can be summarised by a quote from Sheila Rowbotham's article for the *New Statesman*:

**'Patriarchy' implies a structure which is fixed, rather than the kaleidoscope of forms within which women and men have encountered one another. It does not carry any notion of how women might act to transform their situation as a sex. Nor does it even convey a sense of how women have resolutely manoeuvred for a better position within the general context of subordination. (1979, reprinted 1982, p74)**

Unfortunately Rowbotham does not carry through this critique of patriarchy as 'fixed' - to an understanding of how a related error occurs with the concept of gender which is attached to the concept of patriarchy.

The concept of patriarchy sets up a fixity to gender categories which obscures the way gender is both relational and fluid. In order to construct an alternative framework for interpreting gender segregation at the workplace it is essential to grasp gender as a process, and this proposition is a critical argument of this thesis.

This was not always my view. Before I examined the literature I held the idea that patriarchy was, and acted, as both an adequate starting point for an analysis of, and an explanation for, women's oppression. I also believed that it provided the women's movement with a framework for aiding feminist political strategy and practice. A critical evaluation of the concept of patriarchy is crucial for the argument I pursue in this thesis and for two other reasons. Firstly, the concept formed part of my theoretical analysis of women's subordination without my ever having thoroughly examined its origins, as it was part of the received knowledge on joining the women's movement<sup>2</sup>. Secondly, I wanted to gain some understanding of the variety of ways the concept was

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<sup>2</sup> The quote from Vogel 1984, p26 reproduced on page 8 makes a similar observation.



used by different feminist writers as I was confused by the lack of agreement, about the concept, especially in the case of feminists who espoused the same theoretical position namely Marxist-feminism, as this was the perspective which at the beginning of the study informed my approach to the subject of women's work.

#### ON PATRIARCHY

Kate Millett's *Sexual Politics* (1970) represents one of the key texts of second wave feminism and provides an analysis of women, sexuality, male dominance and politics. Her examination covered different areas of social life including the ideological, the biological, the sociological. She presents a feminist re-interpretation of class, economics, education, and 'force' and argued persuasively that 'patriarchy' is not only maintained by a process of sex-role stereotyping but also that patriarchy is, as a system of oppression, equivalent to the Marxist analysis of the class system. The book had a forceful and vigorous effect on the emerging women's movement in the late 1960s.

In an early critique, Juliet Mitchell (1971) pointed out that, although Millett had isolated various elements which subordinated women, she had failed to identify the mechanisms which united these elements. This criticism of the theorising of patriarchy is one of the most frequent quoted in the literature which deals with these issues. Another recurrent criticism which was also



pinpointed at this early stage by Mitchell (1971), is the charge that Millett's concept of patriarchy is both an ahistorical and an universalistic explanation of the subordination of women. As she explains:

Patriarchy may seem universal, but in the first place this universality is part of the ideology by which it maintains itself, and in the second where it does indeed have common factors through different political systems these common factors find themselves in different combinations in all specific instances. (Mitchell 1971, p83)

Beechey's (1979) examination of the Millett text made the same points and concluded that:

*Sexual Politics* provides primarily a description of patriarchy relations and some of their manifestations . . . (but) is unable to provide a satisfactory explanation of their foundations. (1979, p69)

Juliet Mitchell had presented a very clear critical evaluation of *Sexual Politics* and also tried to provide an alternative way of using the concept of patriarchy in order to construct a theory which analyses male dominance and women's oppression in relation to the capitalist mode of production. Ironically, exactly the same criticism which Mitchell levelled at Millett's work was directed against Mitchell's own use of the concept of patriarchy in an article by Heidi Hartmann. She said:

Although Mitchell discusses their interpenetration, her failure to give patriarchy a material base in the relation

between women's and men's labor power, and her similar failure to note the material aspects of the process of personality formation and gender creation, limits the usefulness of her analysis. (ibid. 1981, p.12)

Despite the problems encountered by the critiques of early feminist texts<sup>3</sup>, the concept of patriarchy gained in popularity and strength in terms of its explanatory power of the position of women. This happened for a number of reasons. For example, as one study remarked:

Firestone's and Millett's books, both published in 1970, had a tremendous impact on the emerging socialist-feminist trend within the women's movement. Their focus on sexuality, on psychological and ideological phenomena, and on the stubborn persistence of social practices oppressive to women struck a responsive chord. The concept of patriarchy entered socialist-feminist discourse virtually with no objection. (Vogel 1984, p26)

Support for this statement can be found with reference again to the work of Mitchell (1971), who despite her criticisms of the theoretical positions adopted by Millett and Firestone, does not discard the concept of patriarchy. Rather she simply works with a different definition of patriarchy; one which she attempts to incorporate into a Marxist framework. The argument she presents in *Women's Estate* (1971) points to the complexity of the relationship between women and economic

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<sup>3</sup> Shulamith Firestone's book *The Dialectic of Sex* (1970) was also subject to a critique from Juliet Mitchell (1971).



production and emphasises the need to understand the changing historical relationship between the two. However her stress on the spheres of reproduction, sexuality and socialisation meant that she and Firestone could be viewed as highlighting one aspect of women's lives. In Firestone's case, the stress is on biology; in Mitchell's case, women's position in the home and in the family. Both emphasise the 'private', 'domestic' sphere as the universal factor shaping women's oppression. The concept of patriarchy as such remained untheorised. Patriarchy in both of these accounts simply referred to the situation of women but not to the mechanisms whereby this was maintained and reproduced. By this stage the concept of patriarchy was central to feminist theory and practice and for some feminists 'patriarchy' became the cornerstone of their analysis.

Two influential collections of articles written in the early 1970s can be used as indicators of the then current level of debate. Michelle Zimbalist Rosaldo's (1974) *Women, Culture and Society* and Rayna R. Reiter's (1975) *Toward an Anthropology of Women* which contained Sherry B. Ortner's, (1974) 'Is Female to Male as Nature is to Culture' are quite deliberate rejections of the biological determinist position which tainted the work of Firestone, whilst at the same time trying to understand the truism that,

the secondary status of women in society is one of the true universals, a pan cultural fact, (Ortner 1974, p67).

In Rosaldo's work, this fact was explained as the result of the positioning of women in the domestic sphere, in the private domain as opposed to the public arena occupied by men. For Ortner, the fact could be explained by the identification of women with nature and men with culture. This conceptualisation of women and their closeness to nature (at one point, Ortner writes that women's 'psyche' are closer to nature), still retains an important place in the ideology of the women's movement<sup>4</sup>. The significance of these and other writings (see Kuhn & Wolpe 1978; Women's Studies Group CCCS 1978) lie in their attempt to resolve the tension within feminist theory which was beginning to emerge. This tension refers to the fact that despite the universality of women's oppression, these articles recognised and provide detailed descriptions of women's lives which stressed that the ways in which the actual specific nature of women's oppression differed from culture to culture, society to society. They produced an immensely contradictory and diverse account of women's subordination. It was clear from the anthropological research that the 'fact' of women's universal

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<sup>4</sup> Witness the debate on the meaning of the peace camps at Greenham and the number of articles which argue over the nature of women's involvement (see Whisker, *et.al.* *Breaching the Peace* 1983).



subordination could no longer be presented with the force which had marked the early feminist writings.

The next shift as Iris Young (1981) explains, is that the concept of patriarchy was being theorised by Marxist and socialist-feminists in one of two ways. The first method, which can be termed the 'radical feminist concept of patriarchy', viewed patriarchy as an ideological and psychological structure. This formulation lead Marxist and socialist feminists to seek to produce a materialist account of women's oppression which tried to show the way in which the ideological structure related to other structures in society. The second formulation viewed patriarchy as generating its own set of material social relations (see Walby 1986). Here the theoretical task was to uncover these relations and show how they interacted with the social relations of production.

#### **PROBLEMS WITH PATRIARCHY**

By the late 1970s and into the 1980s the theoretical framework established by these writers was increasingly debated and developed (see Reiter 1977; Kuhn & Wolpe 1978; Women's Studies Group 1978; Barrett 1980; Sargent 1981). The shift to an analysis of patriarchy grounded in the concepts of mode of production and mode of reproduction put socialist-feminist writings in the forefront of the theoretical debates concerning women's oppression, though there was increasing discontent

expressed by sections of the women's movement about the academic and inaccessible nature of these articles (see Kaluzynska 1980). The discussions gained wide dissemination through the appearance of various feminist theoretical journals: especially *Feminist Review*. They were also stimulated by the growth of women's studies courses throughout Britain, particularly at the higher levels of the education system. The interest in these debates was also generated by the development of Western Marxism and the continued growth of various Marxist theoretical journals, for example, *New Left Review*, which encouraged the mix of European and American Marxist ideas and led to an exciting cross-fertilisation of theoretical trends and controversies. The theoretical project of a materialist understanding of women's oppression was increasingly located within the parameters of Marxism. For example, many key articles appeared in the journal *Capital & Class* produced by socialist economists. Another example which gives an indication of how this relationship between Marxism and feminism was addressed is the collection *Feminism & Materialism* (Kuhn & Wolpe, 1978). In an article entitled 'Patriarchy and relations of production', the writers state,

Although as marxists it is essential for us to give analytic primacy to the sphere of production, as feminists it is equally essential to hold to a concept such as the



relation of human reproduction in order to understand the specific nature of women's oppression. (McDonough & Harrison 1978, p28)

The piece ends with a reminder of the feminist analytical contribution, 'patriarchy . . . remains a key object for marxist feminist analysis' (ibid., p40).

A number of problems began to emerge from these articles and debates. Firstly, the primacy which was accorded the Marxist analysis of the sphere of production set the parameters on feminist theorising. Secondly the Marxism used in these accounts was conceived as a completed body of knowledge onto which an uncritical notion of 'patriarchy' was generally to be attached. This represents a very static and mis-informed image of the debates within Marxism and of the difficulties Western Marxists were having in using Marxist analysis to discuss such issues as class, 'race', the development of the welfare state - the state in general. The other problem was the lack of consensus between the Marxist and socialist-feminist perspective about the definition of patriarchy. This resulted in considerable confusion when one was trying to compare the different attempts to construct a dual system theory especially when these accounts were written from within the same theoretical framework.

Veronica Beechey's article 'On Patriarchy' (1979) tackled the problem of definition by clearly

demonstrating the confusing and divergent interpretations of patriarchy which characterised much of the literature. She also began to prise away at a chink in the, by now, strong armour of patriarchy when she showed how the concept of patriarchy, despite its different definitions and the different ways it had been used in relation to the concept of mode of production, preserved its ahistorical and universalistic essence. The concept of gender, however which is embedded in this concept is not discussed.

#### **THE UNHAPPY MARRIAGE OF MARXISM AND FEMINISM**

The problem encountered by Marxist-feminists in attempting a synthesis of Marxism and feminism and/or constructing a dual systems theory of patriarchy and capitalism were addressed in a now famous essay, 'The Unhappy Marriage of Marxism & Feminism' by Heidi Hartmann (1981). Hartmann's opening paragraph rails against the fact that within the marriage, feminism was losing out:

**The marriage of Marxism and feminism has been like the marriage of husband and wife depicted in English common law: Marxism and feminism are one, and that one is Marxism. (ibid., p2)**

The main criticism which can be made of this article is that her main argument is directed against the Marxist side of the union. This one-sided approach is further marred by the fact that the Marxism she attacks is, 'a conception of marxism that is itself inadequate and



largely economistic' (Vogel 1981, p197). In many ways she appears to view the Marxists as men and thus as having a very limited understanding of feminism, and to believe that feminists are women who obviously are equipped theoretically with a faultless concept of patriarchy<sup>5</sup>. By her lack of appreciation of the many schisms and debates within the Marxist paradigm, Hartmann fails to understand how these theoretical difficulties opened a space from which Marxists-feminists could begin to develop a feminist-Marxist synthesis. Despite the limitations of the Hartmann essay, her work is very important because she indirectly revealed the contradictions which have plagued the work of Marxist-feminists. Her article enabled Iris Young (1981) to discuss the inconsistencies in many of the attempts to produce the marriage of Marxism and feminism. For, as Young points out, throughout Hartmann's essay, it is Marxism which is attacked and not feminism. Though Hartmann only questions the limitations of the Marxist analysis of capitalism and not the limitations of the feminist analysis of patriarchy, she is nevertheless obliged in her concluding paragraph to remark:

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<sup>5</sup> This impression is given by the fact that when she is talking about feminist theory she uses the term 'we' and 'our' and she put this as oppositional to Marxists. For example: 'It is logical for us to turn to marxism for help in that reassessment because it is a developed theory of social change. Marxist theory is well developed compared to feminist theory, and in our attempt to use it, we have sometimes been side-tracked from feminist objectives. The left has always been ambivalent about the women's movement, often viewing it as dangerous to the cause of socialist revolution. When left women espouse feminism, it may be personally threatening to left men'. (1981, p31)

Patriarchy as we have used it here remains more a descriptive term than an analytic one. If we think Marxism alone inadequate, and radical feminism itself insufficient, then we need to develop new categories. What makes our task a difficult one is that the same features, such as the division of labour, often reinforce both patriarchy and capitalism, and in a thorough patriarchal capitalist society, it is hard to isolate the mechanisms of patriarchy. (op.cit., p29) (my emphasis)

Heidi Hartmann's article enabled the contradictions to surface which had been bubbling away for years in the theoretical project of constructing a Marxist-feminist analysis. Iris Young in her essay, 'Beyond the Unhappy Marriage: A critique of the Dual Systems Theory' (1981), argues not only against Hartmann's version of the wedding but also against most of the analyses which have put forward similar versions of the dual system theory. She does this by expressing severe doubts about the feminist dowry of patriarchy. By logically working through the contradictions present in these dual-system theories, she asks how is it possible to 'separate patriarchy from a system of social relations of production even for analytical purposes' and she correctly concludes:

it seems reasonable, however, to admit that if patriarchy and capitalism are manifest in identical social and economic structures they belong to one system, not two. (ibid., p7)

By now the problems encountered by various writers who have attempted to construct a dual-systems theory were



becoming commonplace. The inadequacies of the theory of patriarchy, which has placed feminist theory in a blind alley of description and which has failed to produce an analysis of women's oppression, became increasingly exposed. Doubts and dilemmas still surrounded these critiques of patriarchy because the writers were also aware that the theory of patriarchy had enabled feminists to describe and analyse women's role in the family, in the economy, in the domestic sphere, and their role in reproduction. However, where the theory was least successful was in moving beyond women's domestic roles into the sphere of production, without reducing women's role in production to their reproductive role. It was this reductionism in analysing women's productive role which appeared to grant traditional Marxism theoretical hegemony. As Young explains:

**All versions of the dual systems theory start from the premise that patriarchal relations designate a system of relations distinct from and independent of the relations of production described by traditional marxism. (1981, p45)**

#### **IN SUMMARY**

In summary, despite the problems caused by the concept of patriarchy, a theoretical framework had become established for the study of the sexual division of labour in both the 'public' and the 'private' sphere. The universalising aspects of patriarchy was used to interpret this division. Occupational segregation was

said to reflect this division, with men being concentrated in men's occupations which were more prestigious, and culturally more powerful and important than women's occupations which reflected their domestic responsibilities (see Stacey 1981).

Thus the theory of patriarchy ironically duplicated the way traditional sociology had regarded women's paid work, which was to regard it as marginal or peripheral to their work in the home. Mainstream sociology had, in the majority of cases before the 1970s, either ignored women's paid work altogether or discussed it as problematic for their roles as mothers and housewives (see discussion in Beechey 1978, 1983; Brown 1976). The idea of separate models for men's and women's relationship to paid work was re-inforced by the theory of patriarchy which explained sex segregation in terms of male power and in this way male domination and female subordination was taken as a given. Rather than challenging these assumptions the debates shifted to attempting to incorporate women into classical Marxist analysis of the labour process, as gender had hitherto been conspicuously ignored.

Kate Purcell (1989) explains how the concept of patriarchy has encouraged forms of explanation that focus on 'women's' jobs rather than the process by which jobs get labelled in this way. The conceptual framework which was adopted by early feminist explorations of women's



work assumed that women's work identity was already established by their roles within the family. By the late 1980s, it became clear that the problem with 'patriarchy' was that the gendered experience of domesticity and employment relations, and the practices and processes by which these experiences structure women's and men's lives, is both contradictory and conflictual. Neither the theory nor the concept was able to explain what feminists had uncovered by the studies of gender at work in the past ten years. These accounts of women and work were reporting on the diversity and differences between women, and the complexity of women's experiences and attitudes to their paid employment.

At the beginning of the 1980s Heidi Hartmann concluded that:

**The present status of women in the labour market and the current arrangement of sex-segregated jobs is the result of a long process of interaction between patriarchy and capitalism. I have emphasised the actions of male workers throughout this process because I believe this to be correct . . . Capitalists have indeed used women as unskilled, underpaid labour to undercut male workers, yet this is only a case of the chickens coming home to roost - a case of men's cooptation by and support for patriarchal society, with its hierarchy among men, being turned back on themselves with a vengeance. Capitalism grew on top of patriarchy: patriarchal capitalism is stratified society par excellence. (Hartmann 1982, p468-9)**

Gender segregation at the workplace is thus explained by reference to a system of patriarchy whereby men oppress

women. Although in Hartmann's article it is recognised that some men have more power than others, she argues that all men benefit from the domestic, reproductive and sexual subordination of women. The formulation contained in the quote had a decisive impact on feminist studies of women's work both paid and unpaid. Despite the fact that the notion of a universal patriarchy has been widely criticised for its failure to explain the mechanisms of gender oppression it is still the case that the conceptualisation of gender which is the corollary to this framework still continues to assert an influence on explanations of gender segregation at work. I am referring here to the way women and men are positioned as oppositional with men having power over women thus producing a particular interpretation of gender relations at the workplace. This conceptualisation came to dominate feminist studies on job segregation which foregrounds women's oppression and subordination in relation to men and marginalised women's power and resistance. What is now very noticeable about these accounts is the level of abstraction of the discussion of gender relations. In effect, gender is never analysed as such, rather the issue becomes the system of patriarchy and the focus is on the relationship between this system and capitalism. This level of abstraction inevitably produced a static conceptualisation of gender with the



result that the process by which gender segregation operates is obscured.

#### PURPOSE OF THE THESIS

The aim of this thesis springs from this critique of the Marxist-feminist approach to the study of gender segregation. The question that pervades the study is how workplace segregation between women and men is produced and maintained. By the early 1990s it was clear that a new approach was needed in order to understand the persistence, despite equal opportunities legislation and the expansiveness of women in the labour market, of occupational segregation. A study at the end of the 1980s concluded that,

The unequivocal evidence of the twelve years following the enactment of equal opportunities legislation is that the provision of formal equality of opportunity in training and employment makes an impact on, but does not radically alter, gender segregation and occupational inequalities. A clearer understanding is required of the links between gender stereotyping, group behaviour and the dynamics of organizations - particularly the significance of sexuality, which can have a major stabilising or destabilising influence on work relationships. (Purcell 1989,p179)

After this initial starting point to the thesis, the overall aim is to present an alternative approach to the study of gender segregation at work. A large number of writers from the socialist and Marxist tradition had attempted to explain occupational segregation by using concepts drawn from Marxist analysis of capitalism (see

Seecombe 1974; Gardiner 1975; Coulson, Magas & Wainwright 1975; Smith 1978; Delphy 1984). The emphasis in these writings was on the contribution of domestic labour and women's position in the labour market to both capitalist accumulation and the reproduction of the system. These debates became paralysed by problems of Marxist economics, and this effectively side-tracked any real progress in the feminist analysis of women's paid employment. It also weakened the popularity of this theoretical and intellectual position. A further weakness with this tradition is that within the Marxist analysis of capitalism labour is only analysed with reference to its' use as a commodity. Therefore the subjectivity of labour is not a factor in this account. However, the relationship between human beings as both subject and object in capitalist social relations means that their subjectivity will influence, shape and interact with the social relations of production, and this subjectivity is gendered. Studying the links between subjectivity and paid labour is a recent phenomenon in industrial sociology, and is due to the impact of Foucault's work on the social sciences. Foucault's analysis of the relationship between power, discursive practices and subjectivity provides a number of conceptual tools from which to re-examine the contradictions of women's experiences of paid work. I have therefore drawn on these theoretical resources in an



attempt to contribute to the debate on occupational segregation.

#### ORGANISATION OF THE THESIS

The organisation of this thesis reflects the theoretical shifts and developments discussed above. The next chapter attempts to show how these debates shaped the discussions of gender at work - a central focus for Marxist feminists - and surveys the impact of this approach on the study of occupational segregation. A key aspect of this discussion is the argument that the conceptualisation of gender which is embedded in the concept of patriarchy, is one that views gender as a category rather than a process. The discussion of this aspect of the problem of patriarchy is a distinctive contribution to the study of gender segregation, and provides the theoretical unpinning for my review of a number of key ethnographic studies of women and work. Because of the dominance of Marxism from the late 1960s to the early 1980s, especially in studies which examined the labour process, the examination of women's paid work became skewed in a particular direction. The empirical studies produced in the 1970s and 1980s on women's work which attempted to apply this analytical framework, as will be shown, slanted the analysis of gendered work towards attempting to trace the mechanisms whereby patriarchy intersected with capitalism, and so the significance of gendered work for the gendering of

identities and subjectivities was not incorporated into studies of the labour process. In chapter three by re-examining a number of key ethnographic studies on women's work which were framed by the theoretical debates discussed above, I illustrate the tendency towards description rather than analysis when the concept of 'gender' is framed as a sex-role rather than as a process in order to show the limitations of the 'sex-role' conceptualisation of gender. The theoretical framework adopted in these studies locate men in powerful positions in relation to women, endowing them with technical competencies, skill and strengths, and by definition conceals, or at best, minimises, the extent to which women's technical competencies, skill and strengths are exercised at work. I also explain how the practices and processes around the gendering of work is obscured by the lack of theoretical attention to the constant cycle of negotiation, reproduction and resistance practised by women and men at the workplace. The contradictions confronting women and men as they negotiate, resist and take pleasure from the social constructions of masculinity and femininity were noted and described but not addressed in any depth. These studies reflect the successes and failures of the Marxist feminist perspective which had a considerable influence on the study of gender and work. I argue that the studies of women and work which used this approach constructed a



feminist account which obscured women's power, skills and strengths by constantly positioning them as controlled and dominated by a powerful patriarchy of men and that this story continues to have a very strong presence, in feminist theory. Chapter four outlines the methodological approach taken in the thesis. It also traces the method of investigation and suggests how the concept of discourse can be applied to the analysis of gender segregation. The interview schedule was designed in order to facilitate an exploration of the practices and activities which contributed to gender segregation in computer programming - the occupation which was chosen in order to facilitate the study. Chapter five examines the sexual division of labour amongst computer programmers in a number of computer software houses. The focus in this section is the process of occupational segregation which is developing in this industry. Several considerations made computer work a useful case study. Firstly, computer work is a relatively new field as it emerged during the second World War (Kraft, 1977) and therefore did not have a long historical tradition of gender stereotyping. Secondly, there are a number of studies which analyse women's increasing representation in computing, providing some examples of different feminist perspectives on the issues, (see Game & Pringle, 1984; Lloyd & Newell 1985; Donato & Roos, 1987; Strober & Arnold, 1987) and which point to some of the

contradictions for women working as computer programmers. Thirdly for the purposes of this study the occupation had to be one in which women and men had the same job title and worked alongside each other.<sup>6</sup> This was because all of the studies on women's work which were available as I set up the research project were studies of women in segregated employment. In order to highlight interests central to the research, it was important to analyse gender at work rather than women at work. In chapter six, I outline the factors shaping gender segregation in the workplaces visited. In chapters seven, eight and nine I begin to analyse the sexual division of labour amongst the computer programmers I interviewed using the concept of discourse which is explained in the chapter on methodology. Beginning in chapter seven with the responses from the men interviewed, I devise a typology of hegemonic masculinity and examine the connections between this discourse and the gendered nature of organisational discourse. The conflicts and contradictions of this discourse for men is explored using both the interview material and the literature on men and masculinities. This section is also an elaboration of how my concept of gender changed from one which implied a social role, to one that signified a social process. Some of the theoretical problems with an

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<sup>6</sup> My personal history also influenced the choice of occupation as I had worked in computing for a number of years.

analysis of gender relations which relies on simply studying men rather than women and men is also signposted at this stage. The organisational culture of computing is the main focus of chapter eight. I discuss the culture of the different companies I visited, highlighting the differences between in-house computer installations and software houses by analysing the working conditions and philosophy with reference to the beliefs and rituals which shaped this occupational community. In chapter nine, I explore the transcripts for responses from the women computer programmers in order to investigate how they negotiate and resist the culture of computing and organisations. By constructing a typology of hegemonic femininity I analyse how this is negotiated and utilised by the women in the organisations visited and how different aspects of femininity shape women's position at the workplace. Chapter nine examines the discourses of science and technology and suggest how these shape the occupation of computer programming. The concluding chapter summarises the interpretation of gender segregation presented in the thesis.



## Chapter Two

### GENDER SEGREGATION AT WORK

Paid employment has become an increasingly important activity for women and involves a greater proportion of their lives, although still very few follow the stereotypical male pattern of continuous life time employment as full-time workers (Dex 1985).

Despite the development of equal opportunities policies and the growth in employment of a few women in professional, managerial and some traditionally male dominated occupations, most women are employed in sex-segregated jobs which are not defined as skilled and large numbers work part-time (Beechey 1987, p1; Hakim 1979).

Segregation concerns the tendency for men and women to be employed in different occupations from each other across the entire spectrum of occupations under analysis. It is a concept that is inherently symmetrical . . . . Concentration is concerned with the sex composition of the workforce in an occupation or set of occupations. Whereas segregation refers to the separation of the two sexes across occupations, concentration refers to the representation of one sex within occupations. (Siltanen et al. 1995, p4-5)

These definitions refer to 'horizontal segregation' as opposed to vertical segregation which is defined as:

Vertical occupational segregation exists when men and women both work in the same job categories, but men commonly do the more skilled, responsible or better paid work. For example the majority of school heads may be men

while the majority of teachers are women, the majority of hospital consultants may be men while the majority of nurses may be women. (Hakim 1981, p521)

Attempts to examine occupational segregation have operated with various foci which Beechey (1987) summarises in the following way. In the 1950s, 1960s and early 1970s, the focus for analyses of women's work and occupational segregation was policy orientated in that it described women's 'two roles' (i.e. their involvement in paid work outside the home, and unpaid work inside the home) and identified ways of overcoming the problems women encountered (see for example Myrdal and Klein, 1968).

By the mid-1970s the feminist sociologists who were concerned with the analysis of women's work adapted mainstream sociological concepts and theories in order to make women and the concept of gender visible. For example, they applied neo-Marxist categories to women's position in the family and focused on the relationship between women's unpaid work in the home and the wider economy, which later became known as the 'domestic labour debate' (Beechey 1987, p6-12).

#### **MARXIST FEMINISM ACCOUNT OF GENDER SEGREGATION**

The main protagonists (Beechey 1978; Benston 1980; Gardiner et al. 1980; Seecombe 1974) agree that when housework is done it not only serves the intrinsic interests of the household but also it is work that

contributes to the maintenance of the capitalist economic system. This is achieved most usually by women who reproduce the labour force through child-bearing and by maintaining the labour force through caring for husbands and children. The debate has centred on whether or not this form of women's work is productive labour which contributes to the creation of surplus value in the wider economy.

Such disputes have been criticised for overplaying the economic relations of housework and capitalism and underplaying the sexual politics of housework (Delphy 1978, 1984) whereby husbands can be seen to be appropriating the labour power of their wives just as the employer appropriates that of the worker. Beechey (1987) suggested that with hindsight the debate has seemed sterile and that by the latter half of the 1970s interest had moved onto gender relations and work. The labour process and women's place in that process provided the major focus for the analysis of labour market segmentation.

For Marxist-feminists such as Beechey (1977, 1978), the central argument was that women held a distinctive position in capitalist forms of labour process because they formed a cheap unskilled workforce which potentially could be an industrial reserve army of labour. Beechey (1977, 1978) suggested that women occupied this role because their dependence within the family economy,



specifically on the man's wage, lowered the cost of their labour power when it was presented to the wider economy. In other words, their wage did not need to cover the full costs of their own reproduction and maintenance in the way that their husband's wages had to provide a family income. Consequently, Beechey (1977, 1978) argued, women occupied an ambiguous position: employers would wish to employ women as long as they could extract greater surplus value from their employment compared with men and yet at the same time if they did not need their labour during times of recession they could easily dispose of them, because women would be taken care of by the family wage.

However this argument was criticised for tending to neglect the role of patriarchy and the ideology surrounding women's role in reproduction shaping their labour force participation (Hartmann 1979), which Beechey (1979) herself began to recognise. Furthermore, other criticisms [which have been accepted by Beechey (1987, p6-12)] of this initial attempt to relate sex/gender systems to the relations of production have suggested that the approach was excessively functionalist, economically reductionist and insufficiently historical (Anthias 1980; Barrett 1980).

These debates cleared the ground and prepared a path for a new and alternative approach to the study of women's position in the labour force, but the conceptual

tools with which to begin such a study were lacking, especially with reference to the concept of gender. The critique of the concept of patriarchy had not exposed the static nature of gender which characterised the accounts of women's work, both paid and unpaid. Men remain untheorised not only in Marxist-feminist analysis but also in radical-feminist work. The position of men in relation to women, the nature of their power, their role in reproduction and production and how they understand their role, needed to be examined, and this is one of the reasons why men are interviewed in this study.

Because of the dominance of Marxism from the late 1960s to the early 1980s, especially in studies which examined the labour process, the examination of women's paid work became skewed in a particular direction. The empirical studies produced in the 1970s and 1980s on women and work which attempted to apply this analytical framework, as will be shown, encountered the problems mentioned in the previous chapter. The attempts to understand and explain gender segregation at work from within this paradigm, slanted the analysis towards attempting to trace the mechanisms whereby patriarchy intersected with capitalism, towards abstract theorising. It is interesting to reflect that a different Marxist feminist analysis of gender segregation at work could have been available if more attention had been paid to the work of Juliet Mitchell, especially her

*Psychoanalysis and Feminism* (1974) which was an early example of work from a perspective which attempted to interpret the psychological dimension of the social: i.e. subjectivity. Unfortunately the perspective was diverted into, as one writer put it,

the tendency . . . to see how much mileage could be got out of existing Marxist categories if they were applied to women (Phillips 1981, p92)

and so the meaning of gender and work for the gendering of identities and subjectivities was not incorporated into studies of the labour process. Michèle Barrett's (1980) use of the concept of ideology introduced the relationship between the construction of subjectivities and work identities, but her stress is on the structuring of the labour market not the gendering of the labour process. A thorough discussion of ideology and discourse only becomes available in her later work (1991), and this book is not concerned with the issues of segregation at work. It is, however, of interest to note the way in which the issues of gender construction, identity and subjectivity, despite the lack of theoretical concepts with which to interpret them, keep appearing and re-appearing in the women and work studies which are examined in the next chapter.

Miriam Gluckmann (1990) points out how the

theoretical point of departure for the discussions on gender segregation was taken



from more general theories of women's oppression developed within the socialist feminist movement. Such theories are united in their rejection of the two opposite extreme formulations, expounded by pure radical feminism on the one hand and by an unreconstructed Marxism on the other, that would explain women's subordination as deriving either from patriarchy per se or from capitalism per se (ibid., p13).

To summarise, gender segregation from the Marxist-feminist perspective is explained largely in terms of the benefits of women's labour for capitalism, thus producing a functionalist explanation which failed to explore the process of gendering: a process which involves the study of men as well as women. The concept of patriarchy had set up an orthodoxy of male power over women and this went largely unchallenged. The concentration on Marxist categories in the Marxist-feminist project led to a polemical attack couched in the following trenchant criticism. Christine Delphy wrote that the purpose of a Marxist-feminist analysis is the, 'exemption of men from all responsibility for the oppression of women' (1984, p179). Delphy accuses Marxist-feminists of being the protectors of the enemy -men. This is obviously a crude simplification of these writers' positions, yet it is a fact that this feminist problematic was not theoretically examined in any great depth. Marxist-feminists failed to directly address this important aspect of the radical feminist position: that is, that men benefit from the



unequal division of labour both in the home and at the workplace. For example as Anne Phillips points out :

Radical feminists seemed committed to a theory that men and women were intrinsically antagonistic, and that male power over women was founded in women's role as child-bearers; socialist feminists counter-posed to this the argument that sexual antagonism was based in the social relations of production and could be socially transformed. But increasingly, socialist feminists felt themselves trapped by this into a position which underplayed the extent of sexual division and antagonism - significantly, it was radical feminism which took the lead in the analysis of sexual violence. (1981, p93)

#### CONTRIBUTION OF MAINSTREAM SOCIOLOGICAL APPROACHES

Alongside these Marxist-feminists debates a rather different approach, based on the 'dual-system' approach was developed in order to examine women's place in the labour market (Barron and Norris 1976). This approach builds on the concept of 'dual labour market' which had been first employed as an attempt to understand the phenomenon of racial discrimination in employment in the United States (Doeringer and Priore 1971). In describing how labour markets seemed to be divided into primary and secondary segments in which the primary sector work was characterised by good stable working conditions and pay levels and the secondary sector was characterised by considerable instability and poorer conditions of employment and pay levels (Doeringer and Priore 1971), analytical analogies were drawn between the position of

migrant labour and black people in Western capitalist economies and the position of women (Barron and Norris 1976).

The debate on gender segregation then became one which adopted either a labour market approach or those who supported a Marxist-feminist approach and there were various internal debates within each tradition. By the late 1970s interest began to shift away from the role of employers in constructing the primary and secondary sectors towards examining how the interplay between employers and organised labour, and the strategies adopted by some workers in the primary sector, secured advantages for these groups (Goldthorpe 1980; Rubery 1978; Rubery and Wilkinson 1994).

Studies by the Cambridge Labour Studies Group (Craig et al., 1984) indicate that attention had turned to the collection of detailed empirical data particularly that of case studies in order to examine how different social groups came to occupy a labour market sector. Alongside this, Marxist-feminists such as Beechey (1987, p11-12) whilst still rejecting the approach of the dual labour market theorists, began to retreat from abstract theory and engaged in more empirically based research in order to analyse trends in women's employment and to document women's experiences of both paid and unpaid work.

In recent years the task facing the analyst of gender segregation is more complex. The expansion of

questions, areas of inquiry and approaches has occurred alongside the emergence of the global economy. Feminist scholars view economic inequalities between men and women not only as the result of economic developments or market forces but also stress that women's work is economically devalued: that women are in less desirable jobs than are men and are treated as marginal, and that as a group, women are likely to be influenced and controlled by men. In some western industrial societies there has been an inflow of women into previously male-dominated occupations posing the issue of re-segregation; and computer programming has been the subject of such research (Wright & Jacobs 1995). Other research on occupational gender segregation by Robert Blackburn and Jennifer Jarman (1998) concentrate on what should be encompassed by the term 'segregation'. The emphasis here is on the indices which attempt to measure the inequalities of wage levels and produce a statistical and mathematical analysis of segregation. The variety in the type of studies of gender segregation have two main objectives; to document the extent and impact of segregation and to proffer explanations as to the persistence of the phenomenon. As discussed above there are two main types of explanations: those that emphasise the role of the market and employment practices and those that emphasise the role of gender ideologies. This thesis concentrates on the latter and attempts to utilise



the concept of gender as a process in order to analyse factors operating in a specific occupation to produce gender segregation. As explained below this conceptualisation of gender differs from the one used in previous studies.

To summarise, gender segregation has been explained in relation to either the structure of the labour market (Rubery 1978; Hakim 1978; Barron & Norris 1976), or by writers who attempts to link understand the phenomenon by suggesting a dual-system - capitalist/patriarchal approach (Hartmann 1982). Hartmann states that job segregation can be explained by the 'hierarchical domestic division of labour (which) is perpetuated by the labour market, and vice versa' (1982, p449). This formulation demonstrates the way the focus of research on women's paid work shifted away from descriptive policy oriented data collection, to the attempt to add women to macro theories of labour processes. It then moved to more micro case study analyses. This shift in focus enabled an increase in understanding of the experiences of women and employment which has encouraged closer analysis of the ways in which gender is constructed. However, though many of the studies of the last decade can be seen as contributing to the construction of the whole map of women's employment and the organisation of work, there were a number of differences and similarities in the use of the concept of gender in these accounts.

## GENDER AND THE LABOUR MARKET

Gender is conceptualised in two distinct ways in the analysis of the labour market. There are those who use gender as simply a sociological variable, like other categories of stratification, and those who view gender as much more than simply another category of analysis. So for example, Siltanen (1994) analyses gender as a sociological category, like class, age, 'race', whereas Cockburn (1991) uses gender as a relational concept. The variation in use is not always clearly visible. Rather the conceptualisation of gender has a tendency to be vague, ill defined and indistinct. This has meant that there is an almost imperceptible shift which has emerged in the analysis of gender in sociological studies of employment. A crucial point here is that whichever way gender is analysed there is a tendency to formulate gender as stable and fixed categories, framed by the concept of patriarchy.

There are a number of explanations for the source of these two theoretical approaches to the study of gender, and for the lack of clarity in relation to way the concept is analysed. Firstly, the change from women's studies to gender studies in the study of women's paid employment produced a blurring of the focus of the analysis of gendered work. Secondly, and relatedly, the way that some aspects of feminist analysis of women's

employment have become incorporated into mainstream sociology.

Before the emergence of second wave feminism, sociological studies of work did not use either women or gender as an analytical category and did not view gender and gender relationships as important dimensions of either the structuring of the labour market or the social relations of production and reproduction. From the 1970s feminist sociologists have struggled to establish women as significant in sociology. However, what happened is that gender became instituted as a category in mainstream sociological analysis. A clear example of this can be demonstrated by the debates in sociology on class and stratification (see Crompton & Mann 1986). In order for women to be discussed in sociological debates, the point of entry which proved less threatening to mainstream sociologists was that gender, like class, as a concept was rendered apolitical. Treating gender as simply another sociological variable detracts from the political thrust of feminist analysis of male power and women's oppression and subordination. This shift was not very difficult to achieve, given that there is no one 'feminist' position, nor an established feminist position on gender. Rather there are a number of feminist perspectives each of which uses a particular vocabulary and proffers a particular strategy in relation to women's



equality and emancipation<sup>1</sup>. The lack of a firm theoretical basis for feminism alongside the theoretical problems produced by the concept of patriarchy in the attempt to analyse gender at the workplace, provide the means by which gender as a sociological variable developed as an approach to the issues. As my theoretical position was formed by Marxist-feminism rather than mainstream sociology, this means that I do not treat either 'class' or 'gender' as sociological variables. The relational approach to the concept of gender which informs my work can be likened to the Marxist concept of class. The analysis of class is a critical aspect of the social relations of production, reproduction and the distribution of power, wealth, authority and status in capitalist societies. So too is gender. The concept of gender which informs my work is that gender is embedded in the organisation of capitalism in just the same way that class is. The distinction between this position and the Marxism of the 1960s and 1970s is that, for me, class is gendered.

#### **PROBLEMS WITHIN FEMINIST SOCIOLOGY**

These shifts and challenges are evident in the literature on women and paid employment, and two distinct feminist approaches can be detected. The distinctiveness

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<sup>1</sup> The problems with the concept of patriarchy can be applied to different feminist perspectives. It is the theoretical problems which are the focus of my critique, not the way the concept is developed within the different approaches. For this type of discussion see Tong (1989).

of a specific feminist contribution to the study of women and work has become increasingly blurred because of the success experienced by some feminist sociologists of incorporating feminist analysis into mainstream sociology. However, the way that gender is now an acceptable and respectable area of study in sociology has meant that it is treated as a sociological variable or category in the manner described above. The acceptability of gender studies has meant that the political thrust of analysing gender has become ambiguous. The distinctiveness of feminist work as opposed to sociological work has become obscured. This is, in part, due to the fact that anyone who chooses to, can call themselves a feminist. Gender when viewed as a sociological variable - an approach more in keeping with mainstream sociology - therefore presents a particular political as well as theoretical approach to the topic.

The alternative approach to the study of women's work is the one influenced by Marxian sociology (see Cockburn & Ormrod 1993; Cockburn 1993, 1991, 1988, 1985, 1983; Beechey 1983, 1979; 1978, 1977; Barrett 1984; Pollert 1981; Westwood 1984). This position is embedded in the political project of feminism, it is not simply an intellectual or an academic project. The writers in this tradition were and are concerned with constructing theory in order to aid social change and gender equality. It is an approach to the subject area of sociology which is

informed by a critique of capitalism and capitalist societies rather than industrialism and post-industrial social formations. This means that the central concern of this approach is not only the liberation of women from gender inequalities and sexual oppression but also for the liberation of all those who are oppressed by the system of production and reproduction which dominates capitalist societies. There are a number of key concepts which signify this theoretical position. These are the concept of ideology; the concept of class consciousness; the concept of capitalist social relations; the concept of power; and, of course, the concept of patriarchy. However these two approaches, although different in relation to the political thrust of the analysis, are linked. They both conceptualise gender as fixed, stable and static and this approach dominates the analysis of gendered work. The notion of patriarchy though political in so far as it engages with differentials of power, reproduces the notion of social roles and sexual categories which make it difficult to explain the persistence and stability of occupational segregation in terms other than male power and control. This approach is unable to account for the contradictions, pleasures and choices women exercise at work. Cynthia Cockburn (1988) divulged the 'embarrassing fact' of feminist explanations of occupational segregation which revealed that women were deliberately choosing their positions in



the labour market rather than being coerced or control by men<sup>2</sup>.

The other methodological problem which emerged from the failed attempt to construct a Marxist-feminist analysis of gender inequality at work is the concept of gender. A legacy of two conceptualisations of gender remained which has important consequences for the study of occupational segregation. I am referring here to the conceptualisation of gender as a sociological variable or gender as a relational concept. Is it to be viewed as (i) simply another question of exploitation and oppression within capitalism, which is the approach of some writers (Siltanen 1994; Vogel 1984) or (ii) should a feminist analysis stress women's oppression as a structural feature of contemporary society? This formulation points to the practices and processes of gender which regulate every aspect of life in a fundamental way, whose benefits to capitalism can be traced, but which also recognises the extent to which women and men have stood and continue to stand in different and at times, antagonistic relations in the

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<sup>2</sup> This 'embarrassing fact' is one of the reasons for my attempt to construct a different theoretical approach to the study of gender segregation and for this reason I would like to quote the full text of this quote. Cockburn writes: "The arguments of those of us who promote 'women into engineering' and 'women into manual trades' are sometimes felt to be fatally flawed by the uncomfortable fact that, on the whole, women do not want to be technologists. Whilst some pioneering types can be shown to be keen to break into non-traditional work, the great majority of women do not appear to want to. Nor do they seem ambitious for top jobs. The research on which my analysis is based indicates that it is important not to bury away this embarrassing fact, but rather to acknowledge it. There is a good reason for women's reluctance. (1988, p39)

reproduction of this social totality. I would argue that the latter conceptualisation of gender relations has to be the hallmark of a feminist approach. One cannot, for example, achieve an adequate understanding of historical change without reference to this continuing dynamic. By stating that women stand in a contradictory and complex and sometimes antagonistic relationship to men, I am not saying that this is fixed or static, for as with capitalist social relations of production, there are constant shifts and changes, and this entails conceptualising gender as process. The next section of this chapter explains why this approach is useful in the analysis of gender segregation.

#### CONCEPTUALISING GENDER

The work of the anthropologist Margaret Mead (1935) laid the foundations for the development of theorising on gender and sex. Mead recognised that most societies attribute some human characteristics to men and some to women. In this early writing Mead used the term 'sex roles' for what was later to become conceived as 'gender'. For Mead the sexual division of labour was a naturally occurring phenomena. Thus the question of the hierarchical nature of sex roles did not arise. Men and women were viewed as 'different'. Much scientific research was carried out on the differences between females and males. These differences were taken as a 'given' and held up as the 'common-sense' view. This

then represents the duality of the consensus view. Difference was supposedly manifest in the fact that a greater number of men and boys studied science, pure mathematics, engineering and architecture. Women and girls, on the other hand, due to their 'caring nature' which had its roots in their biology, focused their attention on the arts, language and the caring professions (Archer & Lloyd 1985, p3).

Historically, and in the present day to some extent, women have been viewed as inferior simply because they are women. The perceived differences between women and men have historically been explained by religion. Differences between women and men were 'natural' and part of a divine plan. However, with the growth and development of the natural and social sciences from the sixteenth century biological explanations for sex difference replaces religious ones (Archer & Lloyd 1985, p4). Through the work of theorists such as Talcott Parsons and writers who used structural functionalism as a theoretical frame, the notion of 'sex roles' began to be conceptualised in terms of social roles and these roles far from being 'natural' were considered to be culturally constructed and thus arbitrary (Myrdal & Klein 1968; Delphy 1993).

The concept of sex roles paved the way for the new conceptualisation of gender which took place in the early 1970s. In an attempt to convince male dominated academy



that gender needed to be taken into account in the construction of social theory, Ann Oakley (1972) provided a definition of the distinction between sex and gender.

**Sex is a word that refers to the biological differences between male and female: the visible difference in genitalia, the related difference in procreative function. 'Gender' however is a matter of culture: it refers to the social classification into 'masculine' and 'feminine'. (Oakley 1972, p16)**

This has the effect of shifting the emphasis away from biology to culture, of shifting the 'natural' to the social. Women's and men's roles were 'denaturalised' by the new paradigm developed by second wave feminism. Christine Delphy (1993) explains how the hitherto 'natural' division of labour and the hierarchy between women and men began to be 'accorded a cultural character' (1993, p2). As Oldersma and Davis write,

**By establishing sexual difference as a social or cultural product, the path was opened toward locating relations between the sexes with other socially constructed relations of power. (cited in Davis, Leijenaar and Oldersma 1991, p4)**

However this view of sex and gender does not account for difference in the gendering between women and between men. Candice West and Don Zimmerman (1987) note that since 1975, the confusion surrounding the concepts of sex and gender has intensified. They note that the earlier

conceptualisation of sex and gender was insufficient to account for,

An understanding of how gender is produced in social situations (which) will afford clarification of the interactional scaffolding of social structure and the social control processes that sustain it. (1991, p34)

The other problem with the static conceptualisation of gender is that in posing the question of gender identity in terms of sexual difference, i.e. "are you a boy or a girl, a man or a woman" determines the nature of the answer. The question implicitly assumes that the person is either one or the other and there is no other category. This is one of the 'rules' that construct gender, that (1) there are only two to choose from and (2) the 'fact' that gender is unchangeable. However these 'rules' cannot be sustained in light on the emphasis on the cultural production of gender. This emphasis shifts the notion of gender as one bound up with sexual difference to one which De Lauretis (1987) says is

the product of various social technologies, such as cinema, and of institutionalized discourses, epistemologies, and critical practices, as well as practices of daily life. (ibid., p2)

Hence the concept of gender began to be theorised as 'process' rather than as a 'role' (West & Zimmerman 1987) and more recently as performance or play (see Halberstam

1994; Butler 1989). However, it is the notion of gender as process which is used in this study as one of the elements which helps to explain the problem of the persistence of occupational segregation.

#### **THE EMBARRASSING FACT OF GENDER SEGREGATION**

Women in Britain had been experiencing a deepening recession in a contradictory way. Their participation in the labour market had been increasing, despite the economic restructuring of the 1980s, whilst at the same time a heightened interest by some employers in equal opportunities policies tended to conflict with government policies which adversely affected women. For example, Beechey (1987) summaries these developments in the following way:

. . . the Thatcher government policies of deregulating the economy, privatising services and trying to create a low-wage economy have adversely affected women. Moreover, the Government has successfully blocked an array of measures proposed with the European Commission to promote greater sexual equality . . . (Yet) A number of companies and public sector employers now have some kind of equal opportunities programme and there has been an upsurge in training opportunities for women. (Beechey 1987, p12-13)

This shifted the focus of enquiry towards organisations and the investigation of gender segregation of work, including divisions between paid and unpaid work, and income and status inequality between women and men as partly created through organisational practices.



The focus for research became the relationship between gender and the organisation of work. Increasingly, Marxist and socialist feminist analyses of work began to examine the processes of social construction and the role of ideology in defining what is skilled work; in questioning why some jobs are predominantly done by women; in questioning why some industries are characterised by part-time work; and in asking what influences men's and women's capacities to participate actively in trade unions? A number of studies, especially the work of Cynthia Cockburn began to demonstrate how certain aspects of masculinity and femininity are constructed and reproduced at work through the labour process as a consequence of the ideological sex typing of jobs. Case studies of organisations highlighted the role of management, trade unions and men in constructing skill definitions and in organising hierarchical systems which favoured men, (Armstrong 1982; Cavendish 1982; Coyle 1984; Pollert 1981). Through these studies it became clear that the concept of a 'job' is a gendered concept, even though organisational logic presents it as gender neutral. A job already contains the gender-based division of labour and the separation between the public and the private sphere. The concept of job assumes a particular gendered organisation of domestic life and social production. It is an example of what Dorothy Smith has called 'the gender subtext of the

rational and impersonal' (1988, p.4). The gender neutral status of a 'job' and of the organisational theories of which it is a part depend on the assumption that the worker is abstract, disembodied, although in actuality both the concept of a 'job' and real workers are gendered and 'bodied'.

Sylvia Walby's edited collection of articles on gender segregation (1988) examined the segregation of women's and men's work in a range of different contexts and found that segregation can only in small part be attributed to differences in education and training between men and women, or to the fact that some women have childcare responsibilities. The argument in this book is that gender segregation has more to do with capitalist's desires to maintain low wages and flexibility, and with the behaviour of men. As Cynthia Cockburn suggests in her excellent contribution, men are under considerable social pressure not to be directly comparable with women at work. Men maintain and reproduce their segregated work space by moving sideways, upwards, or by acting to keep women out. This is not to suggest that differences between women and men is the only form of segregation. As the article by Annie Phizacklea discusses the major division between women is that of 'race', which produces 'ethnic niches' in the gender segregated labour market. These areas are characterised by high rates of unemployment and job

insecurity and low pay. There is also the obstacles suffered by part time women workers in relation to male and female full timers. Despite this, the book shows that the demarcation between women's and men's work is being reproduced in all sectors, surviving and re-forming around new technologies, economic restructuring and new work relations. However the book also reveals the 'embarrassing fact' that women are making conscious choices about their positions in the labour market; choices which in several Marxist feminist accounts were considered as 'false consciousness'.

Certain problems impaired the attempt to establish a framework for a Marxist-feminist analysis of women's oppression, and this failure had consequences for the way the concept of gender is applied in mainstream sociology. The perspective got side-tracked for a search for a mono-causal explanation of women's oppression which, when found, could usually be charged with providing a functionalist analysis. The 'site' usually turned out to be one of the categories in Marxist analysis, e.g. division of labour, ideology, class, alienation, reproduction and so on.

In this chapter I have outlined the problems with this approach. However in attempting to overcome the level of abstraction at which the debates were conducted, case study approaches began to shift attention to the process of gendering at the level of social formation.



By this I mean, the region, the locality, the organisation, the occupation. These debates cleared the ground and prepared a path for a new and alternative approach to the study of women's position in the labour force, but the conceptual tools with which to begin such a study were lacking, especially with reference to the concept of gender. The critique of the concept of patriarchy had not exposed the static nature of gender which characterised the accounts of women's work, both paid and unpaid. Men remain untheorised not only in Marxist-feminist analysis but also in radical-feminist work. The position of men in relation to women, the nature of their power, their role in reproduction and production and how they understand their role, needed to be examined, and this is an important aspect of this study.

#### **IN SUMMARY**

The studies of the last decade can be seen as contributing to an understanding of occupational gender segregation and highlighted a number of problems. The valuable contribution of these studies (e.g. Cavendish 1982; Pollert 1981; Westwood 1981) has been in directing attention to the social processes in the construction of femininity at work. However they have concentrated on the experiences of working class women in manufacturing industries and have stressed that both women's consciousness and women's place in the industries, unlike

men's, can be 'read off' from their place in the domestic sphere (Beechey 1987, p15, p123, p190), thus underplaying the evidence they have generated about the role of the workplace in the construction of femininity.

These accounts which will form the focus of the third chapter of this thesis appear to be radically different, at first glance, from the 'two roles approach' adopted by Myrdal and Klein (1968). However there are similarities in that the analysis of women's paid work is seen as dependent on women's roles in the family. So it appears that ethnographic studies whilst providing detailed accounts of women's employment in specific organisations still look to the family to provide explanations for occupational segregation. In examining these texts there is a conscious attempt made to avoid the assumption that family orientation is primary for women and work orientation is primary for men. This focus follows on from Dex (1985) who in her evaluation of some classic studies from industrial sociology and her analysis of the Women and Employment Survey Data (Dex, 1985) suggests that there is a similarity between women's and men's attitude to work. She argues that women's and men's orientations to work are influenced by their own employment histories, their position in their life course and the characteristics of the local labour market. She found that there is a "remarkable degree of convergence" between women and men's employment. She identifies a

need for research which utilises a framework which fits the assertion that

men's work cannot be understood with reference to women, just as women's work cannot be understood without reference to men. (Dex 1985, p44)

The following chapter is an beginning of the attempt to present the case for an alternative framework from which to account for the persistence of gender segregation.



## Chapter Three

### WOMEN & WORK STUDIES

This chapter examines the ways in which the theoretical difficulties and issues discussed in the previous chapters shaped the feminist writings on gender and work from the early 1980s. Because of the analytical framework adopted in feminist accounts of women and work, this gave rise to largely descriptive studies of women's role in the workplace, and as many of these early studies were more concerned to demonstrate 'patriarchy' in action rather than attend to the process of gender operation and construction, the emphasis is on women's subordination rather than independence. The legacy of this type of theorising is that men are always represented as dominant and powerful in these accounts, in opposition to women who are positioned as inferior, subordinate and powerless. This formulation of gender relations established an explanatory framework for gender segregation which still continues to influence discussions of women's paid work and feminist strategies for change. It became established through a number of influential studies and can be illustrated by a passage from a book which presents a cross cultural and historical analysis of gender-based job segregation.

Women and men have always had a different relation to technology. Men are seen as technically competent, creative; women are seen as incompetent, suited only for the minding of machines which have been constructed, maintained and set up by men.

Notions of skill, too, are founded on gender distinctions. Men capture skilled jobs (that is those involving training, expertise, knowledge) for themselves; moreover all jobs done by men, simply by virtue of that fact, are seen as more skilled than those done by women. Similarly women are pushed into unskilled jobs, and the skills that they do have are seen as 'natural' (cooking, caring for people, sewing) and therefore devalued . . . in factories segregated workgroups of women and men develop their own highly specific and mutually excluding cultures. Women's cultures centre on their home lives, on families and domesticity: conversations, rituals and symbols are concerned with homes, romance, marriage, children, clothes, food and the feminine lifestyle. Cakes and recipes are exchanged, clothing catalogues circulated, advice on how to handle husbands and boyfriends passed on. By contrast men's cultures are more work-centred, and also emphasise exaggerated versions of masculinity (sometimes symbolised by aggressive initiation rituals): talk features sport, heavy drinking, sexual bravado, anecdotes stress strength, audacity, resistance to authority, physical exploits of various kinds. (Bradley 1992, p68-69)

In this chapter I want to show how this formulation became established through the concept of gender which is embedded in the concept of patriarchy<sup>1</sup>. I re-examine key texts which investigate gender segregation and the labour process by inspecting the processes performed by women, using a concept of gender as fluid and relational, in order to construct an alternative account of gender and work which can shape an alternative theoretical

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<sup>1</sup> It is important to note that I am not denying the existence of male power and gender inequalities - and that I use the concept of patriarchy to refer to this system, in other words as a descriptive concept. I am using the term 'system' to signify a complex order whose 'principles of organization shift over time' (Hennessy 1993, p18). Though I am not entirely happy with this formulation a discussion of the differences between a Marxist notion of systems versus Foucault's use of the term networks is beyond the scope of this thesis.



framework. The concept of patriarchy appears unable to capture the process of women's transforming, negotiating, manoeuvring and resistance in relation to the inequality they encounter in their daily lives. Though the arguments I elaborated on the concept of patriarchy are now generally accepted, it still continues to frame an explanation of gender segregation at work which contains the notion of gender as relating to sexual difference rather than a notion of gender as process. The former conceptualisation of gender positions women and men as oppositional and thus obscures the process of gendering which occurs at the workplace. To continue to state the question of gender in these terms conceals rather than illuminates the practices and discourses which engendered women and men, and thus the process by which women are relegated to subordinate positions at work. The notion of patriarchy locates men in powerful positions in relation to women, endowing them with technical competencies, skill and strengths, and by definition conceals or at best minimises the extent to which women's technical competencies, skill and strengths are exercised at work. Using patriarchy as an explanatory device means that the constant and continual negotiation which operates around the gendering at work is hidden. The concept obscures an interpretation of the contradictions confronting men and women as they negotiate, resist and take pleasure from the social



constructions of masculinity and femininity and the operation and performativity of gendering (see Butler 1989).

Rather than simply assert this argument, I intend to review some key ethnographic studies of women's work in order to demonstrate how the use of gender as a category helped to establish a feminist approach on gender segregation at work. This view of gender has now become an obstacle to the development of a theoretical framework for interpreting gender relations at work. Ironically these early studies of women and work constructed a feminist approach which obscured women's power, skills and strengths by constantly positioning them as controlled and dominated by a powerful patriarchy of men. I am not arguing here that gender inequalities do not exist; they do. Rather, my argument is that if these inequalities are to be overcome, it is necessary to understand the process by which they are produced and reproduced. I begin by demonstrating the tendency towards description rather than analysis when 'patriarchy' is used as an explanatory device. Next I present a re-reading of these studies in order to draw out a representation of the differences among women and the contradictions of their experiences of work both paid and unpaid. By exploring the actual processes performed by women I want to construct an alternative account of

gender and work which can begin to shape an alternative theoretical framework for the study of job segregation.

#### WOMEN ON THE LINE

The study *Women on the Line* by Ruth Cavendish (1982)<sup>2</sup> is a text which typifies a descriptive rather than a theoretical study and is a classic example, from the beginning of second wave feminism, of an early account of women's work. Cavendish identifies herself as a member of the socialist wing of the Women's Liberation Movement. She became a factory worker, not with the expressed interest of writing a book (this came later), but as part of her political commitment to working class politics. She does not make any great claims for her account: as she explains the notes she made during her seven months stint at the factory were part of a personal diary rather than research notes. It was only as a result of the persuasion of friends that she decided to produce and publish the work. She is chiefly concerned with the lack of participation of working class women in the women's movement and she used the study to demonstrate the double oppression of women as wives and workers. The book is a good example of the inadequacies of Marxist analysis of gender and class divisions within the working class. According to classical Marxist theory the men and women on the factory floor all share a similar class position

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<sup>2</sup> This is a pseudonym taken by the sociologist Miriam Glucksmann, see her discussion in *Women Assemble* (1990).

because of their relationship to the means of production. The inadequacy of this formulation is exposed by Cavendish in her description of the crucial gender divisions between them in terms of power, authority and status. She also notes that differences of power and authority also exist between the men on the factory floor and the men in management. There are differences too between the women in relation to 'race' and ethnicity. Ruth Cavendish does not share the cultural background of the women 'on the line', not simply because of her period in higher education but because she, unlike the majority of the women in the factory, was born and brought up in England. Over 70% of the women on the line in her study are Irish, with another 20% West Indian and 10% from Gujerat in the west of India.

The book provides an ethnographic account of women's working lives on an assembly line. The line processed components for motor car manufactures, and the study concentrates on the final assembly stage. All the assembly line workers are women. The pressure of the work, in terms of the physical and mental stress produced by both the discipline of the line and by the male hierarchy, are sharply portrayed. The speed and pace of the work, the operation of the line, the interaction between the women, and sometimes between the women and the men are very clearly presented. The working conditions are described as noisy, hot, stuffy; the



physical space occupied by the women is narrow and restricted. They don't wander around the factory at will: they are confined, continually hunched over their benches, unable to leave their station unless they obtain permission from their supervisor and/or the availability of a relief operator to take their place. In the study the men who work on the factory floor act as charge hands, supervisors, quality controllers, and progress chasers. They are described as having more freedom of physical movement compared to the women as they are at liberty to walk around and stand about without constant supervision. The differences of space according to gender is a constantly recurring theme through accounts of women's work and is related to the fact that women are supervised and controlled much more than men at work. A recent study makes a similar observation,

**Women occupied relatively less space, and less prominent space in the factory than men. This too reflected women's own reticence: we found the majority of women eating their meal at their work station, leaving the dining room to men.**

**(Gomez 1994, p145)**

In *Women on the Line*, the work lives of these women is portrayed as hard, boring, dirty and stressful, with low wages and poor conditions. The rate for the job was so low that a number of the women also needed part-time jobs in order to supplement the wages. The work lives of the women are described as arduous and demanding both in

time and energy. Cavendish tells how the work at the factory affected her social and intellectual life; that she had no time for friends, for reading or going to the cinema. She went home, sat in front of the television and went to bed. She explains that from these experiences she began to realise why family and home become the most important activities and relationships for these workers, and offers this as part of the explanation for the lack of participation of working class women in the women's movement and in trade unions. It is clear from this account that women working in these conditions did not have the required time or energy, but chiefly time, for political activity or involvement (see Campbell & Charlton 1978, 1980). She argues that it is family responsibilities rather than a man or romance as such, which dominated the lives of the women. Though sexuality is not an issue which is discussed at any length in the book, there is an implicit assumption that the women are heterosexual, as gay and lesbian relationships are never mentioned.

#### **DESCRIPTION RATHER THAN ANALYSIS**

The study concentrates on describing the labour process of the 'line' in great detail, and the ways by which the women both accommodate and resist the monotony of the job. There are regular descriptions of the sexual division of labour on the shopfloor as well as in the home which stress women's family responsibilities.

Though gender relations are not discussed in any theoretical way, what is clearly argued is differences and inequality of work both paid and unpaid between women and men. These differences are framed around a discussion of women's domestic responsibilities and it is implied that this accounts for the gender segregation of jobs in the factory. The representation of the work performed by these women is depicted in extremely gloomy and negative terms, and is generally depressing.

However the descriptions of the actual work done by the women revealed the technical nature of the process. Yet this is not commented on, despite the technical skills involved, despite the dirt and the noise, the work was represented unproblematically by the author, as women's work. The women assembled components by hand, using power driven screwdrivers and some simple machines - no problem with screwdrivers here. The flavour of the technical aspects of the work can be demonstrated by the following descriptions:

the basic mechanism was covered with modules, sprockets and diactors, and some versions also had three transistors and a filter, each with a cover (Cavendish 1982, p16)

Above the benches hung the airguns, power-driven screwdrivers which we had to pull down to operate. On the bench we had a wooden stand to rest the UMO on, or a mechanical jig to fix it in (ibid., p17)

you had to paint two small holes in the basic mechanism with blue silicone, then place a saucer-shaped disc on the basic mechanism, followed by a dial which went on the centre of



the disc, aligning pin-head-sized holes in all three. Then you used a magnetized screwhead to pick up pin-sized screws, and screwed them through all three sets of holes to secure the three components together. The silicone was dark and made the holes hard to align . (ibid., p24)

The work was also very dirty:

the nuts, screws and basic mechanisms were black and greasy and the bench was covered in dust; so you had to spend most of the breaks cleaning your hands so as to avoid smearing black grease on your food. (ibid., p24)

The description of the labour process in *Women on the Line* which demonstrates the technical nature of the job - the fact that the components were for motor cars; the noisy and dirty conditions of work - ironically presents a complete contrast to the 'traditional' picture of women's work and, leads to the question: why did the women and the author take it for granted that this was women's work? Is it deemed to be 'women's work' simply because women are doing it? Why were the technical aspects of the work ignored?

I want to argue that one of the reasons why the technical aspect of the work performed by the women is ignored in the account is that technical work is associated with men's labour, the work was designated as unskilled by the management and by the women workers and this characterisation was accepted by Cavendish. Thus the question - how were these women able to reconcile their work with notion of femininity? - is never asked?

The fact that the women did not view the work they were doing as technical, and the fact that they associated technical work with men can be demonstrated by the following classic example of women's claims to technical incompetence. As Ruth Cavendish states:

I had a set-to with Doreen one morning about wiring plugs. Her hair dryer had broken and she thought the plug had gone, and wanted a man to fix on a new one. I said she should learn how to do it herself; it was much easier than a lot of the jobs we did on the line. But she said no, she wasn't going to learn, because there'd always be a 'fella' around who could do it . . . In a way, Doreen was protecting her own sphere - life was hard enough without wiring plugs and putting up shelves as well. (1982, p75)

An insight into the contradictions and complexities of gendering at work is revealed by this quote. The woman was aware that she had the capability to wire a plug but by asking a man to help her, she was not only making sure he does some work, but she was also affirming her femininity and his masculinity around technical expertise. This woman was manipulating aspects of the discourse of femininity in order to negotiate a division of labour in her favour by pretending incompetence and dependence. A similar observation is made in the study of women and video recorders by Ann Gray (1987). She found that some women adopted an attitude of 'calculated ignorance' in relation to this technology in order to avoid the additional household chore of organising the recordings of television programmes. If women

'pretended' that the technology was too complex, men then had the task of buying the video cassettes, storing them, marking them and recording programmes. The point here is that women's attitudes to technology are complicated, and their 'ignorance' and lack of interest should not be so easily read off as incompetence (see Bradley 1992, p68).

As there is no discussion of the contradictions of gender and work in the study there is no way of knowing why the noisy, dirty, technical work performed by the women does not contradict their identity as female subjects either in their eyes or others. By others I mean here, the men on the shopfloor, the men in management, and the husbands, brothers, fathers, friends and partners and other women. The technical aspect of their work is not constructed as either problematic or contradictory for their femininity. This is so in spite of the fact that the women had "very definite views about what sort of work was fitting for a man: building work and hard physical labour was much more 'manly' than working in a factory" (Cavendish 1982, p74). Yet Cavendish reports that some of the women would mention, almost *en passant* the fact that their fathers, husbands and partners had prepared dinner and did the housework. She writes: "It was clear that most husbands did the shopping and cooking if they were at home" (1982, p30) and "father cooked the breakfast and did all the weekend shopping" (1982, p54). It would seem from this that only



certain types of work are deemed 'unmanly', by both men and women, and only in some contexts. Yet the contradictions expressed by the women in relation to gendered work is not discussed in the text. The implied explanation for gender segregation given in this account is that women are unable to compete on equal terms with men in the workplace because of their unpaid labour in the household. Rather than problematising the practices by which gender is enacted at the workplace, this account assumes a model of male dominance and female subordination as an explanation for the existence of 'men's jobs' and 'women's jobs'.

#### **GIRLS, WIVES, FACTORY LIVES**

Anna Pollert's *Girls, Wives, Factory Lives* (1981) is another study of working class women's work, this time in a tobacco factory in the south of England. This account follows much more closely the work of male sociologists such as Huw Benyon and Theo Nichols (1977), (who writes an introduction to the book) in that it is based on informal interviews and participant observation on the shopfloor. Though she declares a feminist approach (Pollert 1981, p8), this is not explained or elaborated. It is made clear however that the theoretical framework which is used in the book is shaped much more by Marxism than feminism. As I explained in the previous chapter, one of the problems in constructing a Marxist-feminism perspective was that attention was paid much more to

Marxist concepts than feminist ones and this hindered the analysis of gender segregation at work. The theoretical framework adopted in the study can be illustrated by the following statement:

**Class, based on the ownership or non-ownership of the means of production, and not sex, is the basic social antagonism. Woman's inferior position springs from the manner in which reproduction - birth and child-rearing - are organised in class society. It is neither inevitable, nor biologically determined, nor a product of 'patriarchy'. (1981, p2)**

There is no discussion of the literature on dual-systems theory, or of the debates on the 'unhappy marriage' of Marxism and feminism. The only mention of the theoretical problems of using Marxism to investigate gender is a reference to the 'domestic labour debate' (1981, p3). So Pollert adopts a similar formulation to Cavendish, which is that women's oppression begins in the home and in the isolation of their domestic life. Women then carry this oppression into paid labour where they are altered and changed by their exploitation as workers. In explaining segregation at work in this way Pollert is positing a concept of gender which conceptualises gender as something (a category) women bring with them to the workplace. Though she is trying to understand how waged work shapes the sexual division of labour in the home, she is only examining this in respect of women. This means that the interrelationships between the gendering of work and gendering in the home is not explored.

Despite this, the richness of the ethnographic material gathered by Pollert indicates the discourses that shape the process of gendering at work, and consequently gender segregation.

#### **TECHNICAL ASPECTS OF WOMEN'S WORK**

The structure of the text is very similar in form to the Cavendish study, but it is less descriptive and more analytical because of its' focus. The analytical focus is the extent to which work is experienced, (she uses the term 'felt') in a different way according to gender (1981, p5), rather than a focus on the process by which work becomes gendered. The first section of the book describes the labour process and provides an account of women's, manual work - work which is deemed to be unskilled by the management and the women. Here again, work is deemed as women's work because women are doing it. With only a few exceptions, women and men did not work alongside each other on the same job and there is further evidence here of the freedom men have at work compared to women. As one woman commented: "They're just standing around. And there's us, we nits, sat down working" (1981, p88). The women earn less than the men and their work was segregated by grades into the four lowest job scales. Part two of the book concentrates on the specificity of women's labour and assesses the importance of women's domestic labour to their waged labour, and the final section assesses the way women



resist, negotiate and struggle against the contradictions of their roles. These last two sections are the most important sections of the book, demonstrating both the creativity and power of women's culture and the demands made on their lives by family and home responsibilities.

There is a striking resemblance in the description of the work the women perform in this factory to the portrait of women's work supplied by Cavendish. Once more the work is very labour intensive, controlled and closely disciplined. Women weigh, pack, strip and spin the tobacco, the atmosphere and working conditions are noisy and dusty, "cluttered with machines, heavy with the clinging smell and dust of the "rag" (tobacco)" (1981, p30). Despite the fact that the work demands precision, speed and dexterity, the work was classed as unskilled. Here again, it is interesting to note the extent to which women were involved in highly technical processes. In this account women are represented as unskilled workers doing boring, repetitive work - but the work was both skilled and technical.

#### **WOMEN AND SKILL**

The social construction of skill has been an important issue in feminist writing on women's work, as Phillips and Taylor had noted:

far from being an objective economic fact, skill is often an ideological category imposed on certain types of work by virtue of the sex and power of the workers who perform it . . . skill definitions are saturated with sexual bias. (1980, p79)

There is now widespread recognition that the division between men's and women's work has very little to do with 'objective' skills (see Cockburn 1985; Crompton & Jones 1984; Collinson & Knights 1986). However the feminist debate on skill by arguing (correctly) that "the worker's sex, not the content of work, leads to identification as skilled or unskilled" (Phillips & Taylor 1980, p85), ignored how the technical aspects of jobs are associated with discourses of masculinity rather than discourses of femininity. In other words, simply saying women's work is as skilled as men's misses the impact of these discourses on gendered subjects. It also means that attention is not paid to the technical aspects of women's work and this fails to explore the extent to which performing 'technical' work under 'dirty' and 'noisy' conditions - a description which more usually describes men's manual work - has any impact on the construction and reinforcement of gender subjectivities on the shopfloor. But this never formed part of the discussion of either women's work or gender segregation in Pollert's book. I would argue that this is because of the concept of gender which is used to interpret the ethnographic material.

Pollert analyses the occupational segregation she observed in the factory in terms of the interplay of market and ideological factors. The following illustrate her thinking on these issues. As she explains:

Qualities such as close concentration, accuracy and manual dexterity which require obvious skill and training in craft or technician's jobs are relegated to 'natural' and untrained 'aptitudes' in women doing women's occupations. And women's 'natural' functions, being family- and home-based, areas which are traditionally patronised as 'mere' women's territory, are hardly regarded as 'real work',. (1981, p65)

The problem with this is that it locates the causes of segregation in terms of their actual or assumed role in the family. That is, women are socialised into gender roles through various ideologies: for example, femininity, domesticity, motherhood and this ensures male dominance and is functional for capitalism. But Pollert's study clearly demonstrates the extent to which gender is a factor at work. This is evidenced by the way the women 'feminise' their working conditions. Pollert argues that the cult of femininity and domesticity which dominate the shopfloor is at one and the same time a point of resistance and a snare as the ideology of femininity ensures that women conceive themselves as primarily housewives and mothers, not as waged workers. As she states:

dreams of escape were cushioned in a feminine culture as the girls tried to 'feminise' the ruthless atmosphere of the production line. Romance permeated the factory. The glowingly lipsticked magazine covers, the love stories, the male pop heroes, the pictures of boyfriends, the circulation of wedding photographs, all were a bizarre contrast to the racket of the dark oily machines. (1981, p101)



The suggestion in Pollet's work is that romance is an ideological trap which lures women into marriage and thus subordination. But why is romance a snare? It can only be a snare if you believe that women's emancipation and liberation will come through waged work, and if you believe that femininity equals subordination and powerlessness. The concept of gender which she uses is one that conceived gender as a category which one takes to work, and it is this 'gender' that impacts on work and in so doing 'feminises' the workplace. However the gendering process is a dynamic process not a static one, so the discourses of gender are being produced by the practices and strategies adopted by both women and men on the shopfloor. For example, around the notion of 'feminisation' lie a host of contradictory and complex strategies, negotiation and resistance on the part of women and on the part of men. There is a fluidity to the process of the social construction of femininity and masculinity which needs to be grasped. Part of this gendering process is the way women and men interact at work. Pollert, by her concentration on one aspect of gender - the ideology of femininity - interprets the contradictions of gender operating only in relation to women and the culture of femininity. This one sided view of the operation of gender marginalises the extent to which men and masculinity also occupy contradictory

positions, and the process by which masculinity and femininity are constituted through interacting at work.

#### **GENDER AND MEN**

The neglect of men and masculinity in this account is one of the weaknesses of the book and is related to the concept of gender that is used. Of men, Pollert writes:

**As breadwinners, men become cut off from the families they support; as oppressors who hold the purse strings over women, they are also oppressed, deprived of children, of domestic enjoyments and skills. Women's oppression is the other side of this coin: the privatised family becomes their cage, the men their overlords. (1981, p110-111)**

The assumption of male dominance and female subordination in the family is evident by this quote. Yet, this view is contradicted by the remarks made by the women when they discuss their attitude towards the family. These women did not experience the family in the manner described above all the time. It is indicated from the interview material presented in the book that the women did not perceive family and domestic life as mundane or empty, and that despite women's ambivalence around marriage (1981, p98) for both women and men, it is waged labour which is an 'iron cage' which limits their freedom and activities. Work is described as the prison and the family is viewed as an escape route from the alienation experienced at the workplace. As Pollert states:

**But while the immediate experience of the work inevitably 'rubbed off ' on to them, . . .**

part of this experience was also aversion to being 'factors of production'. This meant they looked not just to the daily escape from work, but again to a 'career' in marriage, as a total alternative. (1981, p99)

The contradictions and complexity of both women's and men's relationship to paid work and the family is continually revealed by the research material, but these contradictions are not attended to. So while it is mentioned that:

Men too, are centred on their families and discuss them at work. But (according to Pollert) they relate to them differently: their family is part of their concern as father and breadwinner. With women it is the immediate, intimate and daily concern with actual processes of family care which penetrates and alters their consciousness of work. Work is overshadowed by the family. (1981, p113)

It is not made clear why she thinks the men hold different views of work and the family to women. Unfortunately, there is no discussion of the way men experience work or their relationships with women both inside the factory and inside the family. The assumption made is that men's lives are structured only by their wage labour and their exploitation as workers and that their experience of work is known, and therefore does not need to be examined. She writes:

Their responses would be a subject in itself; but my main preoccupation was not with men or masculine identity for themselves but only in the ways they were woven into the women's experience. (1981, p8)



The lack of analysis of men can be related to her use of a 'gender' model in her analysis of women and a 'job' model in her evaluation of men (see Feldberg & Glenn 1984)<sup>1</sup>. These models assume that men's social relationships are determined by the type of work they do and that women's relationships are determined by the family. It is clear that this explanatory framework is shaping Pollert's interpretation of women's work and men's work. Yet her reference to male power in the text demonstrates that her gender model is connected to the concept of patriarchy which represents men as dominant and women are subordinate. This theoretical approach, especially when linked with Marxism, pushes a structural explanation for both women's and men's position in the labour force rather than promoting an examination of the construction and process of gendering at the workplace. So Pollert's account, despite its analytical strengths never answers the question she set herself, which is:

What, in short, is distinctive about wage labour for a woman, because of her socialisation as a woman and her oppression as a woman? (1981, p5-6)

The problem still remains unanswered. How do the women in Pollert's study 'make sense' of the jobs they do given the discourse of femininity which socialises women - a discourse which positions women as unskilled, technically incompetent, used and abused by technology and science,

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<sup>1</sup> A fuller discussion on these models is provided below.

subordinate and dominated by men and whose major preoccupations are marriage, children and family? For Pollert the answer is that these women are not 'bound' to their work, rather they are tied to family and domestic life:

'Women's work' has a lower status, to both men and women, than unskilled men's work. It is effeminate, to men, without being 'feminine' to women. While heavy manual work can be culturally appropriated by working-class men to celebrate maleness and machismo, the so-called 'light' manual work of women cannot be subjectively understood as in any way complimentary to their sexual or class self-image. All it does is confirm further the deprecatory self-perception of women as patient, passive and inferior creatures, fit for the mundane tasks of assembly work and housework. There is no way girls can use the cultural system of inverting the status of mental and manual labour to confirm in their own terms the value of their future in unskilled work. (1981, p97)

In this account masculinity is realised through work, whereas femininity is acquired through marriage, motherhood and family. Pollert's study strives to capture the lived experience of women's working lives and the interplay between women's oppression and their exploitation as waged labour. The originality of this study lies in this analytical focus, that is, the impact on the organisation of work of women workers and the impact of paid work on women. However by ignoring gender relations at work and the process of interaction between women and men, she is unable to account for the

contradictions and complexity of women's and men's (gender) responses to work, both paid and unpaid.

#### ALL DAY EVERY DAY

Sallie Westwood's book *All Day Every Day* (1984) is very similar in content to the one described above. The research for this book was conducted from March 1980 through to May 1981 and it is a good example of someone trying to struggle with the theoretical problems experienced by feminists analysing the workplace at this time. The introductory chapter directly engages with the debates on patriarchy and capitalism and the problem posed to both these analyses by the question of 'race'. From her discussion of the different approaches she provides a rationale for the dual-systems approach. She states:

My analysis takes seriously the claim that the economic level is also affected by the ideological and the political and that because of this patriarchy has a material base not only in the way in which men control and exploit women's labour power, but in the way in which patriarchal ideologies intervene at the economic level. Ideologies are both outside and within individual subjectivities, and they play a vital part in calling forth a sense of self linked to class and gender as well as race. Thus, a patriarchal ideology intervenes on the shopfloor and subverts the creative potential of shopfloor culture to make anew the conditions of work under capitalism. (1984, p6)

Dual-system theory takes two forms: one stresses the patriarchy side of the intersection with capitalism; the



other takes the form of a stress on capitalist interaction with patriarchy. In Pollert's study the stress is on capitalism shaping patriarchy whereas in this study the emphasis is on patriarchy shaping capitalism. She explains her understanding of the concept of patriarchy with the following quote from Heidi Hartmann:

The material base upon which patriarchy rests lies most fundamentally in men's control over women's labour power. Men maintain this control by excluding women from access to some essential productive resources (in capitalist societies, for example, jobs that pay living wages) and by restricting women's sexuality. Monogamous heterosexual marriage is one relatively recent and efficient form that seems to allow men to control both these areas. (Hartmann cited in Westwood 1984, p5)

Male power is assumed in this model and there is also the assumption that capitalism and patriarchy are compatible and sustaining for men. By contrast, women are viewed as subordinate, powerless and negligible in the same operating system. Paradoxically, however, the descriptions of women's lives, as in the texts discussed above, demonstrate the contradictions of this approach. Sallie Westwood writes that her study shows:

the interaction of patriarchy and capitalism in the factory and the home, and the response the women make to this by generating and sustaining a shopfloor culture which structures the way that becoming a worker, through a woman's role in production, and becoming a woman, through her role in reproduction, are brought together and reinforced. It is an oppositional culture, providing a focus for resistance to managerial

authority and demands, while forging solidarity and sisterhood. It is also an ambiguous resistance because it so clearly colludes in promoting a specific version of womanhood. (1984, p230)

This, however, is precisely what needs to be explained. What or where is the source or the origin of the resistance in patriarchal capitalism? Which elements of patriarchal capitalism produce the resistance? What is the process whereby women both resist and collude with their subordination?

Like Cavendish's and Pollert's accounts, Westwood's *All Day Every Day* represents another case study of low-paid, segregated work; this time in a hosiery factory. Both books have a similar structure in that they examine the labour process, the ethnic differences between the women, discuss women's resistance to changes in the wages and bonus scheme, the problem of trade unions and relations with a male hierarchy. In this factory, 43% of the women were from the Asian sub-continent and 5% were Black women of Caribbean origin. There was no mention of Irish women, though she does say that there is a large Irish community in the area. It is unclear if the white women workers are Irish or English.

Westwood's account however develops and expands the description and analysis of women's working lives by introducing a discussion of distinctions between women on the factory floor. In this study the differences between

the women are observed, and though this is not discussed in any theoretical way, the issues of power differentials between women is mentioned. So, for example, the personnel manager was a woman. Some women occupied supervisory positions as production managers and time and motion officers. For the first time in studies of working women's lives, women workers are shown to have power and control of both women and men on the shopfloor. Consequently the issue of power relations between women other than those of 'race' and class are added to the combination of gender relations on the shopfloor. Unlike the women in Cavendish's study, the women were aware of their skill even though they were classed as semi-skilled. The issues around gender and skill is not a feature of the book. Rather the distinctive thrust, and main theme of Westwood's account lies in her analysis and description of the practices around the 'women's culture' which dominates the shopfloor. She describes this as "domesticating production" (1984, p22) but her study is more concerned with analysing how this culture colludes with and re-enforces domesticity. Both Cavendish and Pollert present women's workers attachment to marriage and the family as a form of 'false consciousness' and whilst these women may view marriage as an escape from dull, noisy work, the view that emerges from these accounts is that marriage is a location for the reproduction of gender inequalities and thus traps women



into a position of dependence on men. In contrast, Westwood's account points to the importance of marriage and family for women's subject position as women. The women workers she interviews refer to marriage as part of the transition to womanhood. It is about becoming a woman, becoming an adult and a mother, and thus marriage represents a celebration of motherhood and femininity and is a crucial aspect of women's subjectivity and identity. These aspects of women's lives are represented in a much more positive light than in the previous accounts and demonstrate an awareness and consciousness of the problems of femininity, but also their power in relation to the discourse. What is striking in Westwood's account is the detailed description of the elaborate and joyous shopfloor culture organised by the women around marriage and motherhood. This emphasis on the 'culture' of the shopfloor is, in part, due to the discipline which informs the writer. Westwood is an anthropologist. So one of the central themes of the book is an analysis of the ideological components of women's culture in relation to domesticity, love and romance. The focus of the work is the extent to which these elements both constitute 'women's culture' and allow women to both dominate and control the environment of the factory. In this account, the strength of the culture is demonstrated by the ways women are able, at times, to resist managerial control and discipline in the factory.

## DISCOURSES OF FEMININITY AS RESISTANCE

The key points of resistance were around the celebration of births, marriages, engagements and leave-taking. Much of the book is taken up with detailed discussions of the way celebrations around these events consume so much of the women's energy and time on the shopfloor that they interfere with the production targets at the factory. Westwood tells how the women 'use' material in order to make costumes for the prospective brides. She describes how engagements, birthdays and retirement parties are celebrated inside working hours by long lunches either in the canteen and in the pub. As she says:

The women of StitchCo . . . saw in the informal organisation of the shopfloor the major resistance to management controls, given that the union was not playing the part that many of the women felt that it should. It was also the case . . . that the elaborate rituals surrounding weddings and brides meant that company time and resources were used not for profit, but for the women on the shopfloor. Their rights to this time and these resources were acknowledged by management who knew from experience that if they attacked these spaces they would have a walk-off to deal with. . . Women on the shopfloor attacked life with great energy and verve; there was nothing to suggest defeat or submission or that they were cyphers or puppets. (1984, p90)

## HARD, TOUGH, TECHNICAL WORK

What is evident from the description of the labour process is that the work was hard, tough and hazardous. It was also environmentally stressful due to the amount

of dust which came from the material. There are some references in the text to the fact that women are interested in the 'technical side' (1984, p23) of their work but this is never explored. It is reported that women had to wait for their machines to be serviced and repaired by male mechanics, who also set the machine for tension etc., while women were expected to clean the machines and change the needles. There is a big difference in wages between the women who use the sewing machines and the men who are the knitters (1984, p41). It is also the case that men are able to secure higher remuneration for their labour in part due to the fact that only male knitters are able to work shifts (1984, p60). These gender differences are explained, as in the Cavendish and the Pollert studies, by reference to male power and patriarchy as originating in the family. However Westwood's analysis is much more alert to the contradictions and complexities of this explanation. She states:

The preceding chapters have shown the interaction of patriarchy and capitalism in the factory and the home, and the response the women make to this by generating and sustaining a shopfloor culture which structures the way that becoming a worker, through a women's role in production, and becoming a woman, through their role in reproduction, are brought together and reinforced. It is an oppositional culture, providing a focus for resistance to managerial authority and demands, while forging solidarity and sisterhood. It is also an ambiguous resistance because it so clearly colludes in promoting a specific version of



womanhood. . . . Women . . . . have a relationship to the means of production which, on the whole, gives them non-living wages and makes them an impoverished section of the working class; it is because of this that they look to marriage as a means to higher wages and access to resources controlled by men. This means that women have a second relationship to class through their relationship to the male wage which reinforces their dependence and subordination in relation to men. (Westwood 1984, p230-231)

#### ON MEN AND PATRIARCHY

Westwood analyses men's power and privilege by focusing on male control of women through domestic labour and on the way men maintain this power either by committing and/or threatening physical violence (see *ibid.*, p182-186). Thus her focus for the analysis of gender segregation and gender shopfloor relations shifts from the workplace to the family. However she only discusses these relationships from the point of view of women. For Westwood the strong sense of a shared women's culture is constructed through women's commitment to the family, motherhood and children. She writes:

There was no doubt . . . that the family was important to all the women on the shopfloor: it provided them with an area of life that they believed was beyond production and the marketplace and the arm of the state. Neither, of course, is strictly true, but that was how the women understood family life. It was valuable and important and must be protected and nurtured by women who alone had the abilities to create an emotionally supportive environment for others. The family the women spent their time and energy creating and sustaining was a patriarchal family in which men had a privileged position, just as they do in the workplace. (1984, p187)

Sallie Westwood concludes her study by arguing that her account demonstrates women's deep commitment to their families, especially their children. There is an underlying assumption in the book that men do not share this commitment and, in this way, the traditional separate spheres of women and men are re-presented in a manner which echoes traditional mainstream sociology's assumptions that women and men occupy separate and distinct spheres<sup>4</sup>. This is so despite the fact that she stresses that "the world of work and the world of the home are not two separate spheres" (1984, p158) but she only discusses this in relation to women. As men are never interviewed around a discussion of their views of the family, there is an underlying assumption that for men family and work are separate worlds.

As Feldberg and Glenn (1984) argue, sociologists and feminists studying women at work tend to bring with them cultural perceptions which shape the way they concentrate on some aspects of women's lives and neglect others. These authors looked at the assumptions which shape the research and suggest that different models operate in relation to studies of women and men at work - namely a job model or a work model for men and a gender model for women. The assumptions of the gender model are that the central life interest and basic social relations are, in

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<sup>4</sup> See Beechey's discussion on this in her sociological analysis of women's work (1978, p155-197).

the case of women, determined by the family. Men, on the other hand, are seen to be determined by their work and the fact that this is their central life interest. Feldberg & Glenn argue that the role of the family needs to be considered more when evaluating men and work and the opposite needs to apply in relation to research on women and work. Though Sallie Westwood's study, and the other studies examined in this chapter are clear attempts to change these assumptions in respect of women's relationships to their paid work, a similar framework is not adopted in examining the contradictions and complexities of men's relationship with paid work and the family. The result is that the complexities of gender at work are obscured by the emphasis on the family model for women and the work model for men. So, for example, though the women are emphatic about their commitment to waged work (Westwood 1984, p71), this commitment is constructed as simply a component of women's family responsibilities and is subsumed by the overwhelming concentration in the book on romance, marriage reproduction and domesticity.

#### **ESTABLISHING AN ORTHODOXY**

In these accounts, the theoretical framework which is used to study women's paid work represents a model of gender relations which is reminiscent of the static conceptions of sex role categories which dominated functionalist sociology. The contradictory lived



experiences of women's lives are discussed as though femininity is a structure which is placed on women by virtue of being born a woman and the way women are socialised. Though the studies demonstrate the contradictions of the ideology of femininity for women's work, they fail to consider the contradictions for men of the ideology of masculinity, work and the family. As Westwood writes: "For many women (and this is true of men as well) home and family appear as the only area of freedom in a routinised life" (1984, p157), but there is no evidence presented in the text which report on men's thoughts on the family. Though the study makes numerous references to the ideology of the family which structures the culture of factory life for women, and the contradictions this produces for women, there are no references to the contradictions of masculinity for men. What becomes established by these accounts is an explanation of gender segregation at work which argues that women's position at work is determined by her reproductive role and the role of domestic labourer; and that these roles are structured by the ideology of femininity.

#### **PATRIARCHY AT WORK**

Sylvia Walby's *Patriarchy at Work* (1986) goes some way to contradict this thesis. Her analysis challenged the view that patriarchy and capitalism interacted as mutually functional systems, and presents an explicitly

theoretical defence of the concept of patriarchy to explain gender segregation at work. One of the most interesting changes Walby proposes to the framework which is used in the previous studies is that she characterises the relationship between patriarchy and capitalism as one of *tension and conflict*. Using this formulation she sets out to establish a theory of patriarchy which overcomes some of the commonly acknowledged problems of the concept. She criticises other writers for adopting a functionalist correspondence between these two systems and claims that conceptualising the systems in *tension* enables the problems with patriarchy to be overcome, especially the criticism that many of the accounts using this type of analysis tend to be descriptive rather than analytical. Walby, in an early chapter in the book, critically evaluates some of the criticisms and reservations about the concept of patriarchy established by Beechey (1979), Barrett (1980), and Rowbotham (1982). On the basis of this critique she dismisses any suggestion that patriarchy is unable to produce a theory of women's oppression. She writes:

The problems of reductionism, biologism, universalism, and inconsistent definition should be seen as problems in specific texts which need to be overcome in an adequate analysis of gender inequality, not problems with the concept of patriarchy itself. (1986, p28)

Using the framework that patriarchy is a system at variance with capitalism she stresses the contradictions of patriarchal structures in wage labour. Her view is that women's position in the family has been largely historically determined by their position in paid work rather than the reverse, and that, when women were denied equality of paid employment either through the strategy of exclusion from areas of work or through the strategy of occupational segregation, they then turn to unpaid employment within the home. She states:

**Against the traditional view that the position of women in the labour market is determined by their position in the family, I will argue for the importance of labour market structures in confining women to a subordinate position in the household. (Walby 1986, p1)**

It is important to note here the shift from a discussion of gender segregation and the labour process (which is the focus for the texts examined above) to the study of gender segregation and the labour market, which is the term that Walby uses<sup>5</sup>.

#### **HISTORICAL ANALYSIS OF GENDER SEGREGATION**

Walby demonstrates the significance of patriarchal relations in securing women's occupational segregation through an historical and comparative examination of this process considering three distinct areas of employment, the cotton industry, engineering and clerical work.

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<sup>5</sup> This is a critical point for studies of gender segregation. I elaborate on the problem towards the end of this chapter.



Through three historical periods: 1800-1914, 1914-45 and post - 1945, Walby investigates the conflicts between the desire of capitalists for cheap labour in these industries which produces tensions for male power and desires in relation to their position in the family and their position in employment. By exploring the shifts and movements between the system of patriarchy and capitalism, she analyses the strategies of job segregation used by men to secure their positions in employment. These strategies involve organising to safeguard their jobs by allowing women's jobs to be constructed as unskilled or semi-skilled and actively excluding women from jobs designated as skilled. A particularly good section of the book is the discussion of these strategies around the Factory Acts (1844, 1847, 1867, 1874, 1878, 1891, 1895, 1901), particularly in the engineering and cotton industries. This section contains a very thorough historical account of the impact these Acts had on women's access to work and to skilled (or jobs classified as skilled) jobs. Without the support of similar historical evidence and data which lays such a good foundation for the theoretical model, the accounts of the other two periods she studies tend (again) to fall into purely descriptive accounts of job segregation. If, however, the richness of the historical evidence was available for the later periods would her theoretical

model hold as a framework for an explanation of gender segregation?

#### **CRITICAL REVIEW OF PATRIARCHY AT WORK**

Her analysis of the articulation of the patriarchal mode of production with the capitalist mode of production, wherein it is the capitalist mode which is the dominant mode and important in respect of the dynamic and changing nature of patriarchy relations and strategies is problematic. This notion of dominance becomes strained when applied to the analysis of job segregation in the different historical periods. For example, in her discussion of the cotton industry in the period 1800 - 1914, what she fails to explain is why women were encouraged to enter this industry and by whom? If the answer is by capitalism why was capitalism stronger than patriarchy at this time and if patriarchy succeeded in restricting women's employment why was patriarchy stronger/dominant? In her analysis of the role of the state she does not explain what determined the position of the state in relation to the Factory Acts. Why was it the case that the state chose to act on behalf of patriarchal relations and not capitalist relations on these issues? If I do appear to have many criticisms of Walby's work, this should not detract from some of it's strengths. I found the study particularly interesting especially her discussion of the period 1800 - 1914 and the historical research around the Factory

Acts, (though even this period is discussed without any reference to the ideology of femininity which was gaining such a stronghold from the 1830s). Walby does usefully point to the notion of conflict and tension in relation to gender inequality and capitalism; but it proves difficult for her to maintain this analytical mode throughout the book

In Walby's study of later historical periods, these positions are reversed. For example, the placing on the statute books of equal opportunities, equal pay and sex discrimination legislation (however inadequate) are still examples of state intervention in the arena of women's employment. What needed to be explained here is the key determinants underlying these shifts and how women's positions and women's struggles were pertinent to these shifts. For although women's struggles are referred to throughout the book there is little examination of them. Though it is claimed that:

Neither did women docilely withdraw from paid work when men wanted them to, on marriage, or at the end of wars, or during depressions. They were pushed vigorously, and vigorously resisted. (Walby 1986, p247)

What is left unexplained is how and why women resisted these attempts to exclude them from the workplace and why they were not successful? Why were women able to resist men and assert their independence as workers? If these questions are not addressed the historical picture which emerges is a history of the failure of women which



repeats the representation that men are stronger and more powerful.

This quiescent image of women appears again in Walby's discussion of part-time work (Walby 1986, p207) where she writes: "part-time work thus represented the new form of the compromise between patriarchal and capitalist interests". Even if this were the case, what of women's own consciousness of part-time work? Part-time work could be conceived by women workers in a positive manner. Recent feminist discussion of the question of 'time' and its importance for women can be linked to a demand that part-time work with proper rates and conditions could well provide a useful model of paid employment and that this alternative can be incorporated into a feminist economic strategy (Phillips 1981). Though the study offers many interesting insights, much of Walby's work is a descriptive account of the position women occupy in the workplace and thus the criticism she makes of Kate Millett's *Sexual Politics* (1977) can also be applied to her analysis: 'Ultimately the work is sophisticated, and full of insight but only descriptive nevertheless' (1986, p22). By locating her discussion of gender segregation and patriarchy at work at a particular level of abstraction Walby produces a narrative which stands outside the object of analysis so, for example, she never engages with or refers to, any of the ethnographic material on women's work mentioned above,

such as Ruth Cavendish's *Women on the Line*, (1982), Sallie Westwood's *All Day Every Day* (1984), Anna Pollert's *Girls, Wives, Factory Lives* (1981) all of which provide evidence of women's power and indicates that male dominance is not complete either in the home or in the workplace. So women's perceptions, concerns, attachments and interests in relation to their work as either domestic labourers or paid labourers needed to form part of the attempt to produce a powerful theory (Walby 1989, p229). A rather hollow structuralist account is supplied instead. Given that this kind of approach is also part of the feminist critique of Marxism and functionalist sociology it is surprising to find the same format being adopted.

#### **FROM PATRIARCHY AS A SYSTEM TO PATRIARCHY DISCOURSES**

The problem with Walby's analysis is that she duplicates many of the theoretical problems discussed in the first two chapters of this thesis. The main problem with the work is the attempt to construct a theory of patriarchy as a mode of production which duplicates many of problems identified by Barrett & McIntosh with this term (see 1979). Walby is attempting to construct a dynamic theory of patriarchy which will explain the shifts and changes in the system of patriarchy discussed above. However, the problem is that the concept of patriarchy locates men in a particular position in relation to women. The notions of male authority, male

power and male dominance are central to the concept. This means that gender relations, including gender inequalities are being theorised through this conceptual model; a model which I have suggested is a static one and one that cannot capture the process of gendering at work. Thus whilst I can agree with Walby's statement that "gender inequality cannot be understood without the concept of patriarchy" (1986, p243), this is only the first rung on the ladder of understanding gender inequality. The understanding produced at this level is that the inequalities between men and women can be demonstrated and described and it is clear that men are a problem - by this I mean the practices which are constituted in discourse which shape men's activities and subjectivity. The different areas which Walby uses in her outline of patriarchy is useful here. She point to "sets of patriarchal relations in the workplace, the state, sexuality and other practices in civil society" (1986, p247). Men tend to have more power, authority and status than women. But the nature of that power and the impact on women differs and is dependent on a wide set of variables of class, ethnicity, sexuality, status, geographical location, etc. These same variables also shape differences and diversity amongst men. Patriarchy does not produce an understanding of difference and diversity or an analysis of changes in relation to gender inequality. In order to understand how gender inequality



changes, and is both produced, reproduced and resisted, it is necessary to have a more fluid and dynamic notion of gender than that produced by the notion of gender contained in the concept of patriarchy. Before I examine that question I would like to point to one important theoretical shift Walby makes by her attempt to defend the concept of patriarchy from the charge of biological reductionism. A key element of the historical analysis she presents is her notion of a patriarchal culture constituted around a set of practices - for example - the practices of exclusion described above. She then links these practices to the discourses of masculinities and femininities which she argues are important for women and men experiences of work and the shaping of gendered subjectivity (see Walby 1989). She analyses patriarchal cultural practices as a "set of discourses which are institutionally-rooted, rather than as ideology which is either free-floating or economically-determined" (ibid.: 227). Though her analysis concentrates exclusively on social structure (1986, p71) nevertheless this construction of the discourses of patriarchal practices shaping men's and women's experiences of work shifts the emphasis away from positioning men (real) men as having power over women to the analysis of the discourses which shape the gendering of work. It is this insight which I wish to develop.

## PATRIARCHY AS A MODE OF PRODUCTION

The theoretical model she develops argues the existence of a patriarchal mode of production in 'articulation' with a capitalist mode of production. Walby's theoretical framework rests on her account of patriarchy as a mode of production which she argues results in key sets of patriarchal relations which are to be found in domestic work, paid work, the state and male violence and sexuality. A definition of patriarchy which she wants to retain is that patriarchy is both a system, a mode of production and a set of practices in which men dominate, oppress and exploit women. (1986, p51) She explains that she is using this definition in order to avoid the problems of previous models of patriarchy which tended to allocate one site or base to patriarchy relations. So, for example, she stresses that the system of patriarchal structures she identified as 'key sets', although inter-related, are nevertheless relatively autonomous. She argues that a patriarchal mode of production establishes a basis for these patriarchal relations, and this mode is analytically independent from capitalism. (1986, p51)

However, I would argue that her attempt to avoid the problem of locating a 'site' or central 'locus' for patriarchy is contradicted by her use of the term 'mode

of production' and it is the use of this term which weakens her attempt to construct patriarchy as a theoretical concept.

The social relations of the patriarchal mode of production are the sexual relations of domestic work which acts as the 'base' (analogous to Marx's analysis of the social relations between owners and non-owners of the means of production acting as a base for the capitalist mode of production) and the system of patriarchal structures - paid work, the state, male, violence and sexuality, are conceptualised as the superstructural components. She states:

**I shall argue that the social relations in domestic work should be characterised as a patriarchal mode of production and this is particularly significant in the determination of gender relations. (1986, p50)**

However this formulation would appear to be repeating the established orthodoxy of the previous accounts (see above) which viewed the relationship between patriarchy and capitalism as consensual rather than conflicting. It seems that yet again gender segregation at work is explained by women's actual or assumed role in the family. Though this is contradicted by a later passage which argues: "Women's position in the family is largely determined by their position in paid work rather than vice-versa" (1986, p70) <sup>6</sup>.

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<sup>6</sup> There is also the dilemma posed by her idea that the patriarchal mode of production is said to be composed of a class of housewives or domestic labourers whose labour is exploited by their husbands. In this she is following the outline of the domestic or family mode of



## GENDER AS A CATEGORY OR GENDER AS A PROCESS

There are a number of contradictions and problems with the attempt to constitute patriarchy as a concept that explains rather than simply refers to the existence of gender inequalities. By shifting from a view of patriarchy as a set of practices constituted by discourses Walby is unable to explain the nature of patriarchy. An examination of the content of the discourses of masculinities and femininities may help to explain why men use various strategies to deny women equality in employment. Without reference to discourse, the concept of patriarchy is unable to account for differences amongst men and amongst women. Thus men and women are represented as opposites, as separate, homogeneous groups. Male power and male domination are deemed 'natural' in this account, the origins or sources or reasons behind patriarchy are not explored and one is forced from this analysis to consider the possibility that there is some kind of biological mechanism in men which pushes or forces them to dominate women. The thinking about gender which informs the use of the notion

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production elaborated by Christine Delphy (1984) which she acknowledges though she fails to take on board the criticisms levelled at this theorist by Barrett and McIntosh (1979). She fails to consider the question of women who live alone, who are not married, or who do not have relationships with men. In terms of exploitation of labour, Walby does not consider the position of children, who may or may not be male; are they too exploitative of women? What is the relationship of children to this mode of production? Another problem arises with her use of the term 'surplus'. She writes: 'the exploitation, or expropriation, which is taking place is the expropriation of the surplus labour of the domestic labour by the husband' (1986, p53). Surplus labour in what sense?, how is this surplus realised by the husband?

of patriarchy is still being employed in the texts which I have discussed in this chapter. However there is a very important caveat that needs to be made here. I have been arguing that patriarchy sets up a particular concept of gender, one that slants the analysis towards gender as a category which is *fixed*. My argument is that in order to understand gender segregation at work then a concept of gender as *fluid* is necessary in order to capture the process of gendering work which produces segregation. But there are two different levels of investigating the phenomenon of segregation. Occupational segregation can be examined either at the level of the labour market or at the level of the labour process.

#### **LABOUR MARKET ANALYSIS V LABOUR PROCESS ANALYSIS**

Studies of the labour process need to utilise a concept of gender which is fluid and relational in order to capture the process of gendering at the workplace. Given the different focus of labour market studies it may well be useful for this type of analysis of use gender as a category. The focus in these studies of the labour market is on outcomes rather than processes and refers to: (i) the pattern of female participation in the labour force (Hakim 1979); (ii) employment restructuring of the content and structure of jobs training and education requirements for occupations which focuses on the division between 'primary' (predominantly male) and 'secondary' (predominantly female) occupations (Barron &

Norris 1976; Crompton & Sanderson 1990); (iii) the role of trade unions in securing advantages (skilled work, better pay and conditions, the 'family wage') for men at work (Rubery 1980, Rubery & Fagan 1995; Barrett & McIntosh 1980; Crompton & Jones 1984; Crompton & Sanderson 1990); (iv) hiring practices and wage levels conditions of service (Crompton & Sanderson 1990; Siltanen 1995). Though all of these writers refer to the importance of gendering at work the different foci of their work means that the concept of gender which is used to explain gender segregation is not as problematic as studies which try to study the process of segregation. The confusion between these two levels is one of the reasons why the feminist orthodoxy on gender segregation was able to establish itself. The explanation this approach offers for job segregation was also enhanced by the richness of the many historical studies which appeared during the 1980s which appeared to reaffirm this theoretical framework (see Liff 1985; Bradley 1992). Walby's text represents a very good example of this type of historical work. As I suggested in the previous chapter there is considerable confusion caused by the different levels of analysis used to explore segregation. Studies of occupational segregation within a particular labour process will of necessity be local and specific. Unlike studies of the labour market which are usually focused on national and international labour markets.



Shifting between these different levels without paying attention to the concept of gender which is most applicable has lead to considerable confusion in the study of gender relations at work.

#### CONSTRUCTING AN ORTHODOXY

In conclusion, in this chapter I have set out how an orthodoxy on gender segregation came to be established through a number of key texts written towards the end of the 1970s and into the 1980s. This orthodoxy relies on a concept of patriarchy which positions women in relation to men as oppositional. In these accounts, men are dominant and women are subordinate. But gender differences and gender ideologies/discourses are not static or rigid. By foregrounding the notion of gender differences and by stressing the implacability of patriarchy, the dynamics of the interplay between women and men, women and women, men and men in the workplace is missing. Women and men do not enter the workplace 'totally' gendered, as unified gendered subjects. Gender is a relational concept not a static one: this means that gender is reproduced in the day-to-day interactions of the workplace and the home. These two spheres, as Joan Kelly (1979) says, interact. These different areas of social reality operate together, not separately. Thus the private intrudes on the public and this includes: sexuality, pleasure, desire - and the public interacts with the private and this includes working at home,

having friends at work visit you at home, having friendships at work (perhaps both women and men) as the mainstay of your private life. Kelly argues that it is necessary to understand that:

in any of the historical forms that patriarchal society takes (feudal, capitalist, socialist, etc.), a sex-gender system and a system of productive relations operate simultaneously . . . to reproduce the socio-economic and male-dominant structures of that particular social order. (1979, p61)

Thus, rather than use a notion of gender difference (which patriarchy as a concept more than facilitates) it is necessary to understand and analyse gender as a process, constantly reproducing and (re)presenting, negotiating, resisting the social construction of gender. It is also important to note that process is not only about power, dominance, and subordination but also about pleasure and desire. The problems surrounding the static notion of gender created by the concept of patriarchy has also affected the research on gender and technology as I will demonstrate in a later chapter. It is important to note that these problems are present even though people do not explicitly use the term 'patriarchy', gender theorising is still informed by this notion. This is largely because 'patriarchy' was for so long the centrepiece of feminist analysis, and marked feminism off from other sociological theories of segregation.

These theoretical problems were not as obvious to me when I began my empirical research. Though my research project had been developed with some critical reservations around the concept of patriarchy initially this meant that I felt it was important to investigate gender as relational and so I was determined to interview men as well as women. It also meant that I was sensitive to the notion that men and women were not homogeneous groups. Consequently at the stage when I began to conduct the empirical research, the only way my critique of patriarchy informed my approach to the research I undertook on computer programmers was that I wanted to produce a study of gender relations which included men. However I still retained a static conceptualisation of gender which meant that I was not as alert as I needed to be to the notion of gender as a process.

The other theoretical problem which affected my research was the feminist orthodoxy on gender segregation which was very firmly established by the time I began to interpret my material. Flowing from this orthodoxy are a number of strategies primarily around equal opportunities policies which were geared towards attempting to change labour market conditions for women as a way of challenging segregation. This approach to gender inequalities at work shifted attention away from the actual processes and practices of gendering at work. The organisation of the thesis reflects these theoretical



shifts and dilemmas. So, for example, in chapter five and six I examine the labour process of computer programming and my discussion is framed by factors affecting the gendering of the labour market rather than the labour process. It is only in the subsequent chapters that I begin to interpret the discourses which shape the practices and thus the process which constitute the work of the programmers I interviewed.

In summary there is obviously a relationship between the two levels of analysis and this is evident by my discussion. Any shifts which occur in relation to destabilising stereotypical notions of what constitutes 'women's work' or 'men's work' will depend on a complex set of factors. Some of these factors include: the culture and traditions of the industry, occupation or organisation; the status of the occupation; the numbers of women in the workplace in relation to men; the extent to which the work is regarded as unskilled; the strength and power of the union organisation and the extent to which the union and management are influenced by equal opportunities perspectives. Another crucial factor is sexuality, especially women's sexuality. In the ideology of femininity women are sex objects, they are marked by their bodies and so bring sexuality into the workplace. There is very little attention paid to this aspect of gender and work in these early studies as the aim was to demonstrate the extent to which gender is a factor in the

organisation of work. The texts reviewed in this chapter sought to theorise the reproduction of gender segregation of jobs by drawing attention to the capitalist and patriarchal structures of power. Though the studies also identified the strategies of resistance by women to gender inequalities of power they fail to focus on the process of reproduction of gendered job segregation. Rather they established a feminist orthodoxy which though it enabled the production of a valuable literature, both historical and contemporary of women's work, it failed to theorise: (i) women as an active subject at work; (ii) the contradictions for women's and men's of the discourses which shape the organisation of work and; (iii) the impact of these discourses on gender identity and subjectivities.

## Chapter Four

### RESEARCH METHODOLOGY

The preceding discussion introduced the notion of discourse as an explanatory concept in the study of gender segregation. It also frames the themes explored in the occupation that is the subject of this thesis. The major task identified was one of investigating the 'embarrassing fact' of gender segregation as discussed by Cynthia Cockburn<sup>1</sup> that directed attention to women's agency in the organisation of work. Following on from the discussion of women's work studies it appeared that men and women do not simply bring their 'gender' into the workplace, gender is also constructed at work, and women are active in this process. By concentrating on women as exercising power, rather than positing them as powerless; how women transform, negotiate, manoeuvre and resist the inequalities they encounter at the workplace could be investigated. Taking into account this view of women at work, I explore the contradictory processes and practices by which women are relegated to subordinate positions in organisations, by examining the discourses which shape computer programming.

Since I wanted to explore these processes and practises an empirically based research strategy seemed more appropriate than further theoretical discussion. On

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<sup>1</sup> Please see footnote no. 2 on page 44.



reflection, this decision to undertake an empirical study can be traced to the sterility of the Marxist-feminist debates of the:

seventies theoretical analyses of women's work [. . .] and a turning towards investigating women's work histories . . . which came to characterise studies of women and work in the eighties. (Beechey 1987, p12)

#### APPROACH TO RESEARCH

The methodological approach adopted in this thesis is that the researcher is not a neutral observer standing outside social relations and social structures. Hence the approach to knowledge is one that is embedded in the following quote by Dale Spender who wrote:

at the core of feminist ideas is the crucial insight that there is no one truth, no one authority, no one objective method which leads to the production of pure knowledge, but there is a significant difference between the two: feminist knowledge is based on the premise that the experience of all human beings is valid and must not be excluded from our understandings, whereas patriarchal knowledge is based on the premise that the experience of only half the human population needs to be taken into account and the resulting version can be imposed on the other half. This is why patriarchal knowledge and the methods of producing it are a fundamental part of women's oppression, and why patriarchal knowledge must be challenged. (cited in Reitharz 1992, p8)

The assumption that the researcher should strive to be a neutral observer is made by many who use quantitative and qualitative methods in a natural science model of social science enquiry. This assumption is challenged by the feminist critique of social science that documents the

male bias of theory and research (Stanley & Wise 1993). Feminist scholars have analysed male bias in the social sciences (Delphy 1984; Roberts 1981; Smith 1988; Stanley and Wise 1983, 1993) and have made a distinctive contribution to long-standing debates about the nature of science and its epistemological foundation (Ramazanoglu 1989). These analyses have led to an important debate around the problems of doing empirical work within a feminist perspective (e.g. Roberts 1981, Stanley & Wise 1983, 1993; Reinharz 1995). There is now available a considerable literature that debates issues on the existence of a feminist methodology. As Stanley & Wise (1993) have noted, feminist researchers have variously denied and affirmed the existence of a specific feminist methodology. Questions about the modes of thinking, data collection and analysis which are more appropriate for studying the situation of women from a feminist perspective were raised early in the contemporary feminist critique of the social sciences (Smith 1988) and are still being explored and developed (Cook & Fonow 1986; Maynard 1990; Reinharz 1995).

However the problem still remains in feminist methodology of the relationship between the researcher and the researched. (Wilkinson & Kitzinger 1996). The problem of the researcher imposing their own definitions of reality on those researched still remains as does the issue of transforming those researched into objects of

scrutiny. Ideally in this research I would have preferred to have the object of the research enter into the process as an active subject, but this was not possible because of the conditions of access on the research process imposed by the management of the organisation studied. However as various writers have pointed out, there is an ongoing contradiction with the notion of the active subject. In that the attempt to translate and analyse the experiences of others means that the researcher objectifies and abstracts their experiences in an attempt to make general statements about, in this case, social processes and structures (Ramazanoglu 1989; Oakley 1981).

#### **RESEARCHING AS A FEMINIST**

The feminist methodological literature centres on four issues. These include, the issue of the distinctiveness of a feminist research method and secondly what does this mean. Thirdly, the usefulness of the attempt to construct a feminist research method rather than adopt and adapt the plurality of social research methods. Finally, what constitutes the relationships between other research methods and feminist ones. In this thesis I am not claiming that the research method I use is particularly feminist though Hilary Graham points out (1984) that

**The use of semi-structured interviews has become the principal means by which feminists have sought to achieve the active involvement**



of their respondents in the construction of data about their lives. (ibid., p26)

Rather I used a research method as a feminist as Reinharz (1992) writes:

Feminist research methods are methods used in research projects by people who identify themselves as feminist or as part of the women's movement. (ibid., p6.)

This raises the question of how I perceive the relationship between being a feminist and the research process.

I have been involved in the women's movement in England for twenty years both as an activist and as an academic. As an academic I have been teaching women's studies and more recently gender studies for the same period and until recently I was the review's editor of the *Journal of Gender Studies* whose editorial board struggles to operate as a feminist collective.

As Reinharz suggests, taking the criterion of self-identification allows one to

reject the notion of a transcendent authority that decides what constitutes "feminist", consistent with the antihierarchical nature of many feminist organizations and much feminist spirit. (1992, p7)

However I am aware of the criticisms, especially from black women writers such as bell hooks and Alice Walker that this criterion is inadequate and so I attempt through my involvement with women's organisations in my locale to avoid the charge against

Women who teach, research, and publish about women, but who are not involved in any way in making radical social and political change, women who are not involved in making the lives of living, breathing women more viable [. . .] If lifting oppression is not a priority to you then it's problematic whether you are part of the actual feminist movement [. . .] to me racist white women cannot be said to be actually feminist. (cited in Reinharz 1992, p8)

The Reinharz text has particular relevance in the context of the debate on the association between a feminist perspective and the use of qualitative methods (Cook & Fonow 1986; Maynard 1990), as this book surveys a large amount of feminist research, and analyses the methods used by feminist researchers. Reinharz provides numerous examples of feminist research that uses an interview approach, ethnography, survey or statistical methods, experimental and cross-cultural approaches, oral history, content analysis, case studies, action research, multiple approaches and original research methods. The conclusion in her survey is that feminists use a multiplicity of methods. Thus, there is no feminist method as such, rather there are a number of interpretative, qualitative and positivist, 'objective' methods and researchers who attempt to combine the two approaches. Thus there is no unique feminist methodology but the experiences, awareness and knowledge of the ways in which sexism acts on women's lives enable feminist researchers to be acutely aware of gender as a process in the structuring

of women's life chances and experiences. It was this perspective that informed the methodology adopted for this study. The choice of research method was also determined by the type of access I was able to obtain in a number of organisations.

#### **GAINING ACCESS**

After an initial lack of success I was lucky enough to get into various computing software houses. In particular, I gained access, through contacts with the University with which I was now working, to a very large engineering company in the area. In total, fifty two interviews were conducted of which twenty-three were with men and twenty nine with women, across a number of computing software companies and computer programming departments in two major manufacturing organisations in the city of Kingston upon Hull. I wrote to all the companies in the Humberside area that produced computer software and from sixteen letters sent, only five companies replied. The number of programmers in these organisations was very small and I was only able to organise a small number of interviews from this method of approach. The bulk of the research was carried out finally at *Business Systems Department*, on the outskirts of Hull. It had not occurred to me to write to them as its' reputation is based on the fact that it is a military aircraft manufacturing company so I did not consider it to be part of the computing industry. A



friend with whom I was sharing the problems I was having in setting up some interviews with programmers, mentioned the Business systems division of a local company and the programming work that went on there. She introduced me to people who had personal contacts within the organisation and they provided me with an introduction to the divisional heads of the different computer sections of the factory. Because of its military and defence work I was vetted by a government agency before I was able to enter the premises. This meant waiting for six weeks before I was 'cleared' to conduct the research. I used this interval to negotiate some time away from my full time job in order to conduct the interviews and was eventually given three months study leave. The various companies who had agreed to let me conduct my research had insisted that the access would be limited to interviews with programmers and stressed that these should only take an hour. Part of these negotiations involved them 'vetting' the interview schedule. I constructed a list of questions that would not alarm the managers of the various organizations (see schedule in Appendix 2). The schedule of questions was arranged in order to facilitate a discussion on programming and gender, and also to appear mediocre and non-threatening to both the women and men I interviewed, the management in the various companies and to the Home Office.

## DESIGN OF INTERVIEW SCHEDULE.

The interview schedule was produced in order to illustrate to the companies the type of questions I would cover during the interview. In effect I tended to use the schedule as a guide, as a list of points to cover, so that the manner, order and language in which the questions were asked could be flexible. However there are a number of factors that influence the design. The key concepts that organised the schedule are the concepts of gender segregation. The meanings given to both these concepts are explained in chapter two. The case studies outlined in chapter three brought forth a number of elements which shaped gender segregation such as family and household structure and responsibilities, education, cultural notions about gender, traditional organisational practices and procedures, local employment market, type of occupation, class, 'race' and so on. Thus a series of questions was designed in order to cover most of these elements.

Rather than use these concepts as a means to measure gender segregation, in other words rather than viewing the phenomenon of gender segregation as something that could be quantified; the aim of the interview was to uncover the operation of the process. Thus the concepts were used as a way of directing the interview towards a particular kind of shared experience of an occupation, so the object of the interview schedule was to turn

attention to this experience. In order to facilitate this a number of steps were taken. Firstly, a letter outlining the framework for the research was distributed to the companies alongside the interview schedule. This paper was also distributed to the respondents in order to provide a framework for respondents. Secondly, the choice of open rather than closed questions were used in order to help the respondents to give responses that were not anticipated by the use of response options for closed questions. Open questions were chosen in order to allow respondent to convey the fine shades of their attitudes to their own satisfaction instead of forcing them to choose one of several statements that may all seem more or less unsatisfactory. In order to avoid frustration as to the intent of the question some probes were provided, for example, "how do you mean that"?, "tell me more about that"?, "anything else"?, "why" or "why not"? In questions 17 and 18 a number of terms were used as probes for the same reason.

The series of questions were chosen to enable the respondent to tell about their entry to the occupation; their work experiences and the ways it shaped their life outside the organisation. The respondents were not viewed as passive agents, rather as being engaged in joint 'sense-making' with the researcher. Thus the interview was based on the model that both the researcher and the respondent exhibit a kind of reflective



intelligence as they negotiate the meaning of questions on the one hand, and the meaning of answers on the other.

#### **INTERVIEWING WOMEN AND MEN**

The schedule contained fifty four questions and was divided into two sections. One section covered job description, training and experience; the other, leisure/outside work activities and family situation. I had some experience of interviewing as I had been employed on a research project for a couple of months that had involved interviewing women and men who were doing shift work. Interviewing has some obvious advantages over silent observation. Firstly, it allows questions to be directed at people about themselves and their behaviour and activities. Secondly, it enables questions to be asked not only about what people do and are, but also what they think and feel; in other words interviewing facilitates the gathering of subjective opinions as well as factual information. Thirdly, it allowed me to ask people how they perceive and interpret their personal circumstances and histories and the actions of others. Finally, it gave people an opportunity to explain the motives and reasons for their own behaviour; allowing them to join the researcher in the process of analysis and interpretation. I attempted to be a 'good' interviewer. (Thompson (1978, p165) states that the 'good interviewer' is a person with

**an interest and respect for people as individuals, and a flexibility in response**

[. . .] an ability to show an understanding and a sympathy for their point of view: and a willingness to sit quietly and listen.

Though at times I fell into Prewitt's characterisation of bad interviewing in that I was

perhaps too aggressive in pursuing the interview and thus antagonise the respondent: or . . . too friendly and accommodating [. . .] or too hurried and cut the respondent off before he (sic) has really provided all the information necessary. (cited in Pons 1988, p1975, p109)

Despite this, these interviews were one of the most exciting and challenging things I've ever done as a sociologist, and radically changed my theoretical approach and ambitions for the project.

I began by collecting information through semi-structured interviews, using the schedule, (a copy of which I handed to the interviewee), as a way of putting the person at ease. I used the specific questions on the schedule as a base from which to invite the interviewee to talk about, describe, and discuss their working lives. My main task was to set and keep the interview going, providing the minimal of direction, asking for occasional clarification, and thus becoming more of a listener than a questioner. I interviewed the 'respondents' using a semi-structured format for approximately an hour and taped the interviews, which I later transcribed.

The management in each organisation had selected a number of computer programmers to be interviewed and



usually provided me with a quiet space in which to record the interviews. This meant that I was unable to establish any criteria for selection and so the interview material is based on a group that is random, self selected and volunteers. The option of interviewing people outside of work time was met with unease by those to whom I broached the idea, though in one instance I was able to record 'off site'. A number of writers (Becker & Geer 1969, p 322-321; Hammersley 1983), all suggest that interview data is less sensitive than participant observation to enable one to record the context and personnel involved in the development and operation of departmental typifications and boundaries. Interview material provides different after-the-event accounts that need to be unravelled in order to provide a coherent explanation of the particular topic being investigated and this is approach that shaped this thesis.

#### REVIEW OF RESEARCH METHOD

My open-ended approach to the interviewing process did enable the research respondents to suggest what they defined as significant, and this proved to be very important when I began to interpret the material. What they stressed was their subjective experience of work and gender relations on the shopfloor, and I was forced to find a method to explicate the contradictions of the meanings they related. However, because I was restricted to a formal interview, I was unable to study the



workplaces over an extended period of time. This would have given me more time in which to check out some issues, especially the apparent lack of awareness over gender relations in the workplaces. It would also have given me an opportunity to interpret the meanings, relationships, culture, history, hierarchy, power and practices of gender relations on the shop floor. I needed to supplement my interviews with observation and group discussion, and this was not available. I was also unable to be around for extended periods of time, which meant that I was unable to build up relationships of trust and relaxation. David Collinson, in his discussion of the research methodology used in his *Managing the Shopfloor* (1992), states that because of his gender he was able to integrate himself into the 'highly masculine, sometimes relaxed, sometimes aggressive informality and joking relationships that characterises most shopfloor interactions' (ibid.; p235), but I was unable to develop this level of informality and acceptance. He mentions how his decision not to use a tape recorder helped to achieve this familiarity, though there is no evidence that my decision to use this method of collecting the data hindered the interviews. I found the fact that I had recordings of all the interviews invaluable. The transcripts, besides containing biographical information of each of the people I interviewed, also provide a collection of descriptive interpretations of the role of

a computer programmer, as well as a range of conflicting and contradictory views and opinions on gender, work, leisure and domestic arrangements. With transcripts I had available a substantial quantity of data that I could continually review. However I do regret very much that I did not keep a field diary or supplementary notebook to record my impressions not only of the people I interviewed, what they were wearing, how they looked, but also a description of their workplaces and workspaces. At odd moments, I did record my impressions on tape, when I look at the transcripts and see these comments their impact is striking in that I am immediately reminded of the person, the day, the place. The disadvantage of relying on taped interviews is that I neglected to consider the importance of this type of information. However, despite this limitation, the material I had gathered did provide insights into people's experiences both of their working lives and the process of gender segregation.

#### **THE STATUS OF THE INTERVIEWS**

The approach to the interview transcripts taken in this thesis is not that the material could provide 'facts' or 'truths' about the world; or that the transcripts could be used in a comparative sense in order to establish a criterion for the validity of the responses. Rather the transcripts were examined and various passages selected in order to use pieces of text



that provide clues to the institutional practices and discourses that shape the occupation under review. This means that the interview material used in this thesis cannot be taken to be valid descriptions of a person's private beliefs, attitudes, opinions or values. Rather the thesis attempts to make sense of the interview material by tracing the discourses that inform the phenomenon of gender segregation in a particular occupation. It takes prevailing discourses of gender, organisations and computing and examines these in order to present an account of segregation that explores how discourses are part of the process through which segregation is produced. I am not arguing that the discourses I focus on are the **only** discourses in the culture which shape gender segregation. These were the ones that were chosen, mainly because of the amount of literature that discusses these discourses and because they provide a good starting point in order to explore the usefulness of this approach to occupational segregation. Other prevailing discourses, concerning age, education, sexuality, could be an area for further study.

#### **BECOMING DIFFERENT**

It was then, as a result of the interviews, that the real change began, especially around my thinking on the concept of gender. The first and most startling stimulus for this change was that I found that the men I met were



much easier to interview than the women. The women tended to be suspicious, wary, and generally defensive and distrustful of me. Because I had permission to interview them, courtesy of the management, there always appeared to be the suspicion that I was simply a management spy<sup>2</sup>, and that I would report back any criticism the women had of the firm, men and management. The men I interviewed were much more confident. Initially there was a wariness, but once I explained my research in more depth, they relaxed and began to enjoy themselves. They were, in the main, very open and revealing about their fears and ambitions for themselves and their families. The men did not feel threatened by my presence, but the women did.

The impact on the interviewing situation was a wariness that was uncomfortable and not very productive, though it would be a mistake to characterise all the interviews with women as operating with these undercurrents. Some of the women I interviewed were very relaxed, friendly and forthcoming: indeed very honest about their relations at work and the way they had to juggle the demands of home and work. Despite this, the impact on my research was such that I began to explore the discourses of masculinity in some depth. I realised that despite my critique of patriarchy I had not examined

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<sup>2</sup> Ramazanoglu (1989) records a similar problem with her 1960s study of shiftworking women.

the way men were positioned by the concept of patriarchy. Rather I had incorporated the radical feminist critique of men as the enemy into my view of masculinity. Just as my conclusion on feminist theorising was that it was no longer possible to discuss women as a unitary category, I realised that I was still carrying around in my head the view of men as a unitary category, and the view of men as 'the enemy'. Men were constructed in many of the works I had examined as patriarchal - meaning dominant, powerful, dangerous for women to know. However, I was now discovering that the men I interviewed could not be understood with this type of explanatory framework. The operation of gender at the workplace was much more contradictory and complex. I turned then to the literature on organisations, in order to determine the extent to which the structure of organisations shaped the antagonisms and sharpened the gender differences between men and women. If it was no longer possible to 'blame men' as it were, for all the problems facing women at work, then perhaps the solution lay in the way work was structured in capitalist social relations, and this lead me to Foucault's work on discourse/knowledge and power. It was then in the period of collating, editing and typing up the taped interviews that the themes of the thesis began to assume more structure and organisation.



## WHY FOUCAULT

In the previous chapter I have sought to show how the theoretical framework of Marxist feminist that dominated key ethnographic studies of women's work and gender segregation in the workplace obscured the power, resistance and agency of women at the workplace. The key factor that emerged from my reading of these works is the fact that gender identity is both constructed and lived. Though much of contemporary social theory addresses this problem of the relationship between the individual and the social, the analytical link between structure and agency is still very difficult to develop. With gender, as with other aspects of the structuring of human social life, the problem of how individuals lead collective lives emerges and re-emerges as one of the more urgent problematics for contemporary social science. Foucault's work has however been hugely important for the reformulation of the place of the individual/subject within structures of power and dominance. One important theme of the women and work studies discussed in the previous chapter is the notion of resistance; but referred to less directly is the theme of complicity with segregation and that theme is of central interest to this thesis. At this point I would like to provide an example of 'resistance' from the interview material. In chapter nine, the section entitled 'coping with, rather than resisting femininity' discusses the remarks made by men



to Karen who was pregnant with her second child. Despite the suggestion by some of her male colleagues that "it was greedy for married women to work" and that it was selfish and irresponsible to have children if one did not intend to stay at home, Karen resisted these attempts to persuade her to stay at home.

What determines individual resistance and complicity is very difficult to analyse, and with the development of psychoanalytic theory it is clear that one cannot address this problem only in term of sociological theory. The questions of desires, identity, fantasy and fear all have to be addressed, as would the ways in which individual personal histories intersect with both structures and discourses. In this way subjectivity and agency is marked with difference.

## **SUBJECTIVITY**

My use of the term subjectivity is based on the article by Wendy Hollway (1984), entitled 'Gender difference and the production of subjectivity'. She provides a concept of subjectivity that helped me to understand that the 'meanings' that embodied individuals give to their practices, in this case, the meanings they give to their gender identity, are critical aspects of the process of gender identification and gender difference. Her work then, demonstrates gender as process, and the relationship between this process and the subjectivity of women and men. Using this

understanding I was able to interpret the research data as evidence of the maintenance and the re-production of gender differences. Though her article is concerned with understanding the 'site' of gender difference, which she locates with the discourse of heterosexuality, her analysis demonstrates the ways in which the discourses of femininity and masculinity are not fixed, but fluid; not distinct but relational. She provides an analysis that is theoretically significant for understanding the relationship between gender differences, subjectivity and change, and is 'at pains to stress that discourses coexist and have mutual effects and that meanings are multiple. This produces choice, though it may not be simple or conscious' (Hollway 1984, p239). She makes the connection between subjectivity and discourses in the following way:

**Foucault's use of the term discourse is historical and this is crucial to the analytical power of the concept. For my purposes the emphasis must be shifted in order to understand how at a specific moment several coexisting and potentially contradictory discourses concerning sexuality make available different positions and different powers for men and women. (1984, p230)**

Her article is wholly concerned with interpreting the discourses which structure heterosexuality, but the model she constructs provided a framework for considering the multiplicity of discourses which operated in the workplaces I had visited, which included the discourses that shaped masculinity and femininity, discourses of



work and organisations, and science and technology. This variety of discourses was making available positions for subjects to take up, and producing choices, though these may not be simple or conscious. However Hollway emphasises that men and women are not positioned equally in discourses concerning sexuality. She says: 'taking up subject or object positions is not equally available to men and women' (1984, p236). The discourses of sexuality are a critical part of the discourses of femininity and masculinity, and in this way the discourses that constitute gender permeate every aspect of social life. Discourse do not stand alone, they can only be abstracted for the purpose of study and analysis but in practice there are a wide network of discursive fields that overlap and intermingle.

#### **GENDER SEGREGATION AND GENDER DISCOURSES**

In order to provide a starting point for a discussion of the issue of gender segregation I take as my starting point the issue of the relationship between gender segregation and gender discourses, between gender as it is lived and gender as it is constructed. Foucault's notion of discourse helped me to understand how discourses frequently construct women and men as different sorts of individuals or persons who embody different principles of agency. For instance, in many western cultures male sexuality and masculinity is portrayed as active, aggressive and powerful, and women



are viewed as essentially passive, powerless and submissive. These dominant representations and categories that I elaborate as hegemonic discourses later in the text bear only a slight relation to the behaviours, qualities, attributes and self-images of individual women and men. It is critical to the way that I use the concept of discourses in my analysis to point out that discourses about gender are not powerful because they provide accurate descriptions of social practices and experiences, but rather because, they engender women and men as persons who are defined by difference. These forms of difference are the result of the workings of discourse, and when brought into play they give rise to the discursive effects that contribute to the production of gender segregation. Gender discourses which construct gender difference is not merely an effect of language, rather these discourses are involved in the production and reproduction of notions of personhood and agency. These discourses are used by individuals to generate the process of constructing themselves as persons and as social actions. It is for this reason that the categories woman and man, and the difference inscribed within and between them, have something to do with day to day practises of individual women and men.

It is not the case that individuals are duped into believing in these discourses, in other words it is not a problem of 'false consciousness'. So, what are

discourses, how do they work, at what levels do they operate, how are they reproduced?. Foucault's work on the emergence of discourses goes some way to address these questions though the problem of the dominance of some discourses in relation to others is not resolved in his work.<sup>3</sup>

The term discourse is used in the thesis as knowledge. That knowledge is constructed in response to the interests of a particular group or class (the Marxian use of the term ideology), is a position rejected by Foucault, so that he can be read as treating *fields of knowledge, discursive formations, discourses*, as if they were independent of both real objects and interested subjects. This however is another tension in Foucault's work. In his early work, it is quite clear that the interests of those in power play some role in the production of prevailing discourses, but this perspective disappears in the later texts.

#### THE CONCEPT OF DISCOURSE

There are a number of approaches to the study of discourse; and the terms 'discourse' and 'discourse analysis' will have very different meanings depending upon the theoretical approach of the writer. For example in the work of Potter and Wetherell (1987), *Discourse and Social Psychology: beyond attitudes and behaviour*; they

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<sup>3</sup> In order to signal this dominance the term hegemonic discourse is used as explained on page 136.



focus on the performative qualities of discourse, that is, what people are doing with their talk or writing. This approach is informed by speech act theory, conversation analysis and ethnomethodology. Potter and Wetherell state that their focus is on 'the detail of an exchange', how discourse is put together and 'its construction in relation to its function'; that discourse analysis is about "language use rather than the people generating the language" (1987, p160-161).

Rather than discourse analysis, the concept of discourse that is used in the thesis is one that is based on Foucault's view of discourse as knowledge. Rather than concentrating on the distinction between discourse and language, the aspect of discourse that informs the analysis in this thesis is one that seeks to elaborate the ways in which discourses shape practices, activities, social relations and the lived experience of gender. I am not attempting to provide an account of the construction of a variety of discourses. Rather just as Foucault does in the *History of Sexuality* (1978) I want to show how a number of discourses impact on the process of gender segregation. The analysis of this complex and contradictory social process uses a concept of discourse that attempts to preserve the relationship between structure and agency without reducing discourse to individual "utterance" or "speech acts" (Smith 1988, p161). Discourses are used then to explore:



the relationship between what we do, what we are obliged to do, what we are allowed to do, what we are forbidden to do. (cited in Barrett 1991, p131)

The emphasis is on the practices of discourses that produced 'discursive regimes' of knowledge/power, or power in discourse. Posing the concept of discourse in this way allows one to ask, how does discourse serve, explain, assist in an understanding of - in this case gender segregation. The linkage Foucault makes between discourse and power means that discourses have effects and implications for social processes as well as social practices. The aim is to attain an analysis that can provide an account of gender segregation that refers to the constituting subject rather than the determination of the economic, to ideology and the relationship of superstructures and infrastructures. Rather the aim is to situate the problem (gender segregation) as relational to the constitution of the subject within a specifically local context. In order to understand these relationships, it is essential to link this notion of discourse with Foucault's conceptualisation of power. His analysis of power is in contrast to one that views power as something that is possessed, something that some people possess, and not others. This analysis of power is in sharp contrast to a Marxian notion of power as the possession of a particular class that is based on their relationship to a mode of production. Rather than

viewing power as a possession, Foucault views power as running through the social network; producing effects; as productive, rather than negative. He says that:

What gives power its hold, what makes it accepted, is quite simply the fact that it does not simply weigh like a force which says no, but that it runs through, and it produces, things, it induces pleasure, it forms knowledge [savoir], it produces discourses; it must be considered as a productive network that runs through the entire social body much more than as a negative instance whose function is repression.

(interview in Morris & Patton (ed.) 1979, p36)

Based on this formulation this thesis aims to explore the effect of a number of discourses in the production of gender segregation in the workplace. This is to provide a contrast to the accounts of gender segregation that pose the problem in terms either of the economic, the State, or the ideological functioning of the family. This is not to deny the power of these structures - as Foucault says "I don't want to say that the State isn't important", rather,

The State is superstructural in relation to a whole series of power networks, that invest the body, sexuality, the family, kinship, knowledge, technology and so forth. True these networks stand in a conditioning-conditioned relationship to a kind of "meta-power" which is structured essentially round a certain number of great prohibition functions; but this meta-power with its prohibitions can only take hold and secure its footing where it is rooted in a whole series of multiple and indefinite power relations that supply the necessary basis for the great negative forms of power. (ibid., p.39)



This interpretation of discourse is also based on other writer's reading of Foucault. Chris Weedon's (1987) discussion proved very useful, especially her exegesis of how Foucault employs the term. She discusses how:

Discourses, in Foucault's work, are ways of constituting knowledge, together with the social practices, forms of subjectivity and power relations which inhere in such knowledges and the relations between them. Discourses are more than ways of thinking and producing meaning. They constitute the 'nature' of the body, unconscious and conscious mind and emotional life of the subjects that they seek to govern. (ibid., p108)

The way the term discourses is used in the thesis is to mean practices and narratives through which people live, think and speak. They are the stories or scripts through which people understand and operate in the social world. Another useful discussion of the concept is provided by Purvis & Hunt (1993) which explains that:

What the concept tries to capture is that people live and experience within discourse in the sense that discourses impose frameworks that limit what can be experienced or the meaning that experience can encompass, and thereby influence what can be said and done. Each discourse allows certain things to be said and impedes or prevents other things from being said. Discourses thus provide specific and distinguishable mediums through which communicative action takes place. (1993, p485)

The notion that 'discourses impose frameworks' led me to attach the concept of hegemony in order to signal tensions in the concept that need to be addressed. There



are some discourses that are more powerful than others and therefore have a much more powerful impact on subjectivity. In order to draw attention to this I use the term 'hegemonic discourse'.

The notion of discourses enabled me to interpret the way individual subjectivity becomes constituted and to represent the practices which structure people's understanding of themselves in relation to the world. However, as Weedon points out, this subjectivity "is precarious, contradictory and in process, constantly being reconstituted in discourse each time we think or speak" (1987, p33). She also states that some discourses are more powerful than others, but (and this is a weakness in Foucault's work) there is no way of determining why or how some discourses are more powerful and some marginal. Some aspects of the connections between discourse, knowledge and power are discussed in this thesis in relation to science and technology, but that does not address the issue of how some discourses are regarded as more legitimate than others. The discourses that form individual identity are intimately tied to the structures and practices that are lived out in society from day to day, and it is in the interest of relatively powerful groups that some discourses and not others are viewed as legitimate. There are then a number of tensions in Foucault's work and I would like to make it clear that I am using his notion of discourse in order

to elaborate how a series of discourses are productive (of gender segregation) I do not accept that the 'world' can wholly be read "only in virtue of the discourse or text" (Soper 1991, p121). I am not in other words to use Foucault's phrase dispensing with 'things' (cited in Barrett 1992. p201).

#### DISCOURSE & IDEOLOGY

My resistance to the notion that everything is discourse can be traced to my epistemological adherence to Marxism, especially in relation to questions of truth, reality, knowledge and power. However I am also attracted to some of the postmodernist debates, especially Foucault's notion of power which I found very liberating in that it provided an escape from the notion that power was simply an imposition, a form of coercion, and allowed the possibility of power being productive, collective and personal. My use of the term hegemonic discourse throughout this thesis is an attempt to hold on to the notion that some discourses are more dominant than others, and that this is related to the power of the capitalist class. In an essay (Fitzsimons 1987) I had distinguished the concept of ideology from hegemony by arguing that ideology referred to a system of ideas and beliefs whereas hegemony refers to the process by which ideas, beliefs, practices and meanings are maintained and constructed in the interests of capitalism. The idea of process contained in the concept enabled me to understand

how meaning is constantly being reproduced and negotiated, and thus can have unexpected and contradictory effects. This provided a framework for understanding social change and how individuals through this process of negotiation with meaning are constantly constituting their world. Foucault's notion of discourse emphasises more clearly this process of construction, negotiation, power and resistance, and demonstrates the impact of a number of discourses on subjectivity, and as such is an advance on Gramsci's concept of hegemony.

The notion of discourse provides the means for interpreting the practices which structure people's understanding of themselves in relation to the world, and suggests how subjectivity is being constructed and negotiated by individuals. However this subjectivity is precarious, contradictory and constantly in process, continually being reconstituted in discourse each time we think and speak. So, whilst this notion of discourse helps to explain the contradictions, shifts and changes in, for example, the discourses of masculinity and femininity, there appears to be no way of determining why or how some discourses are more powerful and some more marginal than others. Marxism does help to explain why some discourses are more powerful than others and Althusser advances a conception of subjects as constituted in and through ideology, so why did I use a concept of discourse when the concept of ideology would



have helped me to achieve a coherent theoretical framework?

There had been a distinct shift in feminism thought from the late 1980s onwards, whereby the concept of discourse rather than the concept of ideology is used to explore femininity and sexuality. Was I merely jumping on a new trendy bandwagon?

An article by Trevor Purvis and Alan Hunt (1993) contrasts the concept of discourse with the concept of ideology by suggesting that:

if 'discourse' and 'ideology' both figure in accounts of the general field of social action mediated through communicative practices, then 'discourse' focuses upon the internal features of those practices, in particular their linguistic and semiotic dimensions. On the other hand, 'ideology' directs attention towards the external aspects of focusing on the way in which lived experience is connected to notions of interest and position that are in principle distinguishable from lived experience. (1993, p476)

Another way of formulating this is to talk about different levels of analysis. Ideology belongs to a level of analysis that is concerned with how the system works - at the level of mode of production. So, for example, Marxist analysis of capitalism can be used to analyse capitalism in an abstract way, but the specifics of different forms of capitalism - American, Japanese, French, English, etc. - need a different level of analysis. Discourse could then be concerned with analysis at this level - the level of social formation.

Ideology is part of the modernist debate on knowledge and truth, and it is associated with Marxism - especially Althusserian Marxism. Whereas the concept of discourse is connected to the works of Michel Foucault and is part of the postmodernist oeuvre. Though it is still a matter of debate as to whether Foucault can be regarded as a postmodernist, and though his work is set against Marxism as a meta narrative it is interesting to reflect on the influence of Althusser on his work given that he was both his teacher and friend.

Althusser had moved the concept of ideology from a crude and simplistic understanding of ideology as false consciousness or as a set of ideas that are simplistically imposed on the working classes by the bourgeois class, to one that is much more complicated and contradictory. Ideology for Althusser was not a set of mistaken beliefs or lies: it represented a particular understanding of the world; a particular interpretation that legitimated a particular view of society. Ideology in Althusser's work represents a shift from a strict determination of the economic base to the notion that ideologies have an autonomy, and are only determined in the last instance by the economy. 'How autonomous is this autonomy'? was one of the debates of the 1970s and 1980s in Marx's literature. Althusser's concept of ideology helps one to understand how sets of ideas - i.e. ideology of masculinity and femininity - are linked to a

system of power and control. However, despite the notion of autonomy, the concept still retains the notion that these ideas are imposed (even if that imposition is consensual rather than coercive), and that ideologies act on people rather than people acting on ideologies. The human subject is passive rather than active in this theoretical framework, and this means that it is difficult to explain shifts and changes in ideologies. How, for instance, can the notion of an ideology of masculinity explain many different masculinities rather than masculinity in the singular?

The concept of discourse helps one to examine this plurality. It also provides a framework from which to trace historical changes in discourses. However given that the use of this concept is usually taken to signal a postmodernist stance it is now necessary to outline my position in relation to this perspective.

#### POSTMODERNIST?

There are a number of reasons why I refute the charge of postmodernism, despite the fact that I use concepts from this oeuvre. This refutation is obviously based on my understanding of this theoretical approach that I will briefly outline.

Postmodernism refers to a body of theory that is also sometimes called post structuralism. The word post modernism is now more frequently used since it carries with it some of the ideas of the second usage - that old



certainties have gone and therefore a new mode of theorising is appropriate. The structuralism to which this theory is 'post', and from which it often takes its point of departure, concerns ideas about the structures underlying all human language and culture: for example Saussure's structural linguistics. It is also 'post' another form of structural explanation, Marxism, and its adherents and sympathisers include many who used to call themselves Marxist feminists<sup>4</sup>.

The modernism to which this body of theory is 'post', and from which it distances itself, is usually defined in relation to ideas that emerged from the 18th century, in the period known as the Enlightenment. This is a useful starting point since most postmodernists define their project in opposition to what they identify as Enlightenment thought, questioning ideas about language, the self, and truth that derive from that period. The basic tenets of postmodernism are concerned with language, the fragmented self, and the notion of universal truths and rationality.

I would agree with the view that language does not simply transmit thoughts or meaning. Thought and meaning are constructed through language, there can be no meaning outside language, and that is in some way relational. A word, for example, means something only in relation to

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<sup>4</sup> One such is Michele Barrett who has recently announced that she is "nailing (her) colours to the mast of post-marxism".

other words. Meaning is never fixed. Nothing has a stable, unambiguous meaning. Hence the word 'woman' does not of itself mean anything, except what it is constructed as meaning in the culture. It is defined in relation to its opposite 'man' (which also has no fixed meaning) and means different things in different contexts.

I would also accept the view that there is no fixed, unitary, subject. There is no essential self that exists outside culture and language. Subjectivity is created through language and culture and is fragmented and fluid. As Jackson explains:

There is no place from 'outside' language and culture from which we can 'know' anything (including ourselves). Our identities and knowledges of the world are products of the way in which we are positioned (or position ourselves) within knowledge and culture. Subjectivity then is culturally constituted, there is no fixed identity; one's identity can shift, can be contradictory. (1992, 26)

The view that there is no possibility of objective scientific 'truth' that exists out there waiting to be discovered is one that is shared by feminists. As McNay states:

The poststructuralists philosophical critique of the rational subject has resonated strongly with the feminist critique of rationality as an essentially masculine construct. Moreover, feminists have drawn extensively on the poststructuralist argument that rather than having a fixed core or essence, subjectivity is constructed through language and is, therefore, an open-ended, contradictory and culturally specific amalgam of different subject positions. (1992, p2)

The rejection of **universal** truths then, is one that is familiar to feminism, and had lead to the notion of situated knowledges.

The idea that knowledges are 'discursive constructs' comes from Michel Foucault for whom discourses produce the things we know rather than describe already existing objects. This perspective allows one to view knowledges and discourses as texts which can be deconstructed. Post modernist suspicion of metanarratives, raises questions not only about the possibility of any theory of subordination, whether economic, political, sexual but of any systematic description of it or even that 'it' exists at all. From a postmodernist position, a statement that 'women are oppressed' is problematic, for what is meant by the category 'woman', and by whose criteria are they/we oppressed? Therefore at its most extreme this scepticism implies a denial of any material reality, and I would agree with Kate Soper (1991, p123), who labelled this a 'self-indulgent' position and one that potentially undermines the political project of feminism, which is based on overcoming the material oppression and subordination experienced by women. I am aware that it is not possible to isolate the problem of 'truth' from the postmodern stress on meaning as something that is not fixed in objects or events, but is a product of language and discourse. So meaning shifts, and can be contested.



But if no one set of meanings is more valid than any other, what is the basis for arguing that one interpretation has more truth than another? Regarding meaning as entirely fluid can mean denying even the starkest of material realities.

This dilemma is critical for feminism in that it also shares a scepticism about knowledge, truth, language and the self. Feminists have long questioned what counts as knowledge and have revealed the androcentric bias underlying much of what passes for truth in, for example, scientific 'proof' of women's inferiority (Lennon 1995). We would also accept that language is not a neutral medium of communication, which is why feminists have been concerned to challenge linguistic sexism. That meanings are not fixed: that what it means to be a woman can shift, and hence feminists have also contested essentialist understandings of gender. Feminists also accept that there is no unitary, consistent self - a feminist can experience desires and feelings at variance with their political ideals. Despite the fact that on the basis of these commonalties a case can be made for postmodern feminism, at the present time I wish to distance myself from this position for the following reasons.

Firstly, the postmodern critique of the Enlightenment's notion of the unitary subject and the substitution of the notion of the fragmented subject

means that it is difficult to understand how individuals exercise agency and change the conditions of their existence. For example, collective and individual involvement in social change. Secondly, the problem of relativism in postmodernism means that the dismissal of value judgements, as well as notions of truth and rationality, makes it difficult to assert political demands on behalf of women.

Finally, as I have argued above, drawing on Foucault's work does not through association mean that I am a postmodernist. Indeed it could only mean that if it was firmly established that this was Foucault position, which is disputed. In order to make this argument I rely on a distinctive feminist interpretation that argues that Foucault is not a post modernist. That rather than dismissing the Enlightenment concepts of truth and reason, he does attempt to reconcile his view of the subject with these aspects of modernism. The reading of Foucault which I rely on to make this claim is the one provided by Lois McNay in her text *Foucault and Feminism* (1992) where she argues that though in his earlier works Foucault does appear to coincide with the postmodern account of subjectivity and agency; in his later books, particularly *The Use of Pleasure* (1985) and *The Care of the Self*, (1986) he develops a concept of the self that contradicts this. As she explains:

**Foucault's final work on the self represents a significant shift from the theoretical**

concerns of his earlier work, and also seems to overcome some of its more problematic political implications. Individuals are no longer conceived as docile bodies in the grip of an inexorable disciplinary power, but as self-determining agents who are capable of challenging and resisting the structures of domination in modern society. (1992, p4).

McNay convincingly shows how

Foucault's theory of practices of the self, rather than representing a rejection of Enlightenment values, represents an attempt to rework some of the Enlightenment's central categories, such as the interrelated concepts of autonomy and emancipation. This reading of Foucault's work is not, as some commentators may argue (Poster 1984; Rajchman 1985), an attempt to force his work into inappropriate categories, because Foucault himself saw his final work as running in a tradition of Enlightenment thought rather than running counter to it. By establishing such a continuity between Foucault's work and the Enlightenment, I also wish to cast doubt on a predominant trend in recent Foucault commentary that argues that his work is a paradigmatic example of 'postmodern' thought. (e.g. Harstock 1990; Hekman 1990; Hoy 1988) (1992, p5)

Appropriating Foucault's emphasis on the productivity of discourse and attempting to apply it to a study of gender segregation at work does not mean that I have abandoned structural or materialist explanations of gender oppression. As Barrett comments, the extent to which feminism has commonalties with the postmodern critique of Enlightenment views of rationality and equality and freedom is 'part of a broader debate as to whether feminism is 'essentially' a modernist or a post modernist enterprise'. She claims that there is a third position



that allows feminism to "straddle[s] and thus destabilize[s] the modern-post-modern binary divide" (1992, p216); and that this position can be used to justify and legitimate feminist theory and practice. Though she does not provide an elaboration of this position my version would be that such a position would contain the perspective that gender is culturally and structurally situated and embodied. Hence my use of Foucault's notion of discourses as productive is one that is strategically selective and is used to explore the persistence of occupational segregation from a different perspective to that offered by studies of the labour market.

#### **IN SUMMARY**

The study was conceived as a specifically feminist sociological account intended to make a contribution to the existing literature on women's work. This meant that both the theoretical framework of the study and the conduct of the empirical research was from the outset informed by a critical awareness of the literature. The major task I identified was one of filling a gap in the research on women and work; to investigate Cockburn's (1988) 'embarrassing fact' as discussed in chapter two, and attempt to find out why women were apparently deliberately choosing their positions in the labour market rather than being controlled or coerced by men.

My project then, grew out of previous studies, especially those discussed in chapter three, and I was particularly sensitised, not to the problems of meanings and their interpretation and analysis, but rather to the theoretical models that had informed the studies. However the interviewing experience and the process of analysing the interview material forced me to evaluate my epistemological stance and my understanding of the sociology of knowledge, which had been defined by Marxist-feminism. Unconsciously the perspective that shaped the research initially saw the role of social scientists as being to discover/uncover the 'ideologies' (usually capitalist) which shaped the actions and meanings of human beings in workplace settings. As was mentioned in chapter two and chapter three certain problems impaired the attempt to establish a framework for a Marxist-feminist analysis of women's oppression, and this failure had resulted in what Michele Barrett refers to as "developing feminist theory whose intention is to destabilize" (1992, p1). Marxist feminist had become side-tracked into a search for a mono-causal explanation of women's oppression which, when found, could usually be charged with providing a functionalist analysis. These explanations usually turned out to be one of the categories in Marxist analysis, e.g. division of labour, ideology, class, alienation, reproduction and so on. Another problem with this perspective was that

the level of abstraction at which the debates were conducted diverted attention away from the process of gendering at the level of social formation. Though these debates cleared the ground and prepared a path for a new and alternative approach to the study of women's position in the labour force, the conceptual tools with which to begin such a study were lacking, especially in reference to the concept of gender. The critique of the concept of patriarchy had not exposed the static nature of gender that characterised the accounts of women's work, both paid and unpaid. Men remain untheorised not only in Marxist-feminist analysis but also in radical-feminist work. The position of men in relation to women, the nature of their power, their role in reproduction and production and how they understand their role, needed to be explored, and the writings by men on masculinity which took off in the 1980s switched attention from a focus on women to a focus on gender.

The emphasis on gender facilitated an approach which viewed gender as process rather than as a sex-role category. There was a renewed interest in viewing people as active agents in their own lives and as such constructors of their social worlds. In taking this approach this thesis is not a search for individual psychological sources of feelings or actions but an attempt to understand how gender discourses are productive of gender segregation at the workplace.



I set myself the task of interpreting the discourses that impact on and shape women's experiences at work by exploring how a number of discourses shape the processes and practices by which gender segregation occurs within computer programming. The aim then is to present an interpretation of how segregation occurs within a number of discursive formations rather than attempting to ask respondents what it might feel like to experience that formation. Each of these discourses are then explored for the strategies and techniques of discipline and resistance that allow the control and exercise of power.

The thesis explores the complex interrelations between the different discourses that produced practices that helped to explain the 'embarrassing fact' of gender segregation mentioned above. In other words, my familiarity with feminist writings generally on women's oppression, and with studies of women position and exploitation in the workplace lead to an examination of how a particular set of discourses shaped the phenomenon of gender segregation at the workplace.

although one starts any effort at thick description, beyond the obvious and superficial, from a state of general bewilderment as to what the devil is going on - in trying to find one's feet - one does not start (or ought not to) intellectually empty handed. (Geertz 1975, p27)

## Chapter Five

### PROGRAMMING SEXISM

The thesis thus far has argued that the feminist orthodoxy that emerged during the 1980s explained gender segregation in terms of the interaction of patriarchy and capitalism and contained a number of difficulties. (i) It explained segregation as functional for capitalism. (ii) It describes the strategies of male workers but is unable to explain them. (iii) This tended to stress men's power and women's lack of power. (iv) That consequently it is unable to offer an explanation for the contradictions of women's and men's positions on the shopfloor; (v) and hence to provide an explanation for women's resistance, organisation and feminisation of the shopfloor. As Beechey & Perkins concluded this explanatory framework presents

a gloomy depiction of women, who appear as passive victims of a series of interconnected institutions - the family, the state and the labour market. (1987, p123)

One of the explanations I offer for the failure of this model to explain segregation is that the static nature of the concept of gender which is embedded in the concept of patriarchy, produced an analysis which emphasised male power and female subordination. This formulation neglects the process of gendering at work and the negotiated and contradictory aspects of gendered

social relations. Consequently an explanation of the continual process of the construction of gender identities and subjectivities and the implications of this for the interpretation of workplace practices, is lacking.

The research presented in the following chapters attempts to offer a more qualitative approach using the concept of discourse which was outlined in the previous chapter. However before this is discussed a profile of computer programming is offered.

#### **SEGREGATION IN THE COMPUTER INDUSTRY**

As a recent overview of occupational segregation in a number of specific occupations in the European Community which included computer professionals, Rubery & Fagan (1995) noted that in theory, 'tradition' a concept which has been used to explain the persistence of segregation cannot be used as an explanation in this industry. However in practice, they found that 'women are seriously underrepresented among computer professionals in all member states' (ibid., p70). They also point out that statistics of this occupation are very difficult to compile as different countries and organisations use different titles for staff in computing. Given this proviso, they found that women represent under 30% of the workers in this industry across the European Community.



**Table 1: Share of women among computer professionals and related occupations**

	All	Computer Professionals:	
		analysts	Analyst/ programmer      Programmer
Belgium	13 (1981)		
Denmark	29 (1991)		
Germany	21 (1989)		
Greece		11 (1980)	19 (1980)
Spain		25 (1992)	45 (1992)
France	22 (1990)		
Ireland	28 (1986)		
Luxembourg			
Netherlands		8 (1991)	13 (1991)
Portugal			
UK	20 (1989)	29 (1992)	23 (1992)

Source: Rubery & Fagan 1995, p.71.

As Rubery & Fagan point out from this table "women appear to occupy a particularly high share of the lower level programming jobs" (ibid., p70). Yet, they also found that in some countries women were increasing their share of jobs as computer professionals whilst in others their numbers were declining, see table 2.

**Table 2: Trends in female shares of computer professional occupations**

Countries with increasing shares	1979-85	1989-90
	%	%
Spain *	17 (1980)	29 (1990)
France	19 (1984)	22 (1990)
Netherlands:		
systems analysts	5 (1979)	10 (1989)
programmers	8 (1979)	15 (1989)
Germany	19 (1980)	21 (1989)
		15 (GDR)
Countries with stable/decreasing shares		
Denmark		
private sector	25 (1985)	24 (1991)
public sector	42 (1985)	38 (1991)
UK	21 (1984)	19.5 (1989)

Note: \* refers to mathematicians, statisticians and related occupations.

Source; Rubery & Fagan, 1995, p72.

This report makes an appeal for a more qualitative approach to the study of occupational segregation in order to understand why the labour market statistics show

that gender segregation is at a high level in every European labour market. This thesis is an attempt to assist in this approach by studying the process of segregation among computer professionals.

The study of computer programmers presented below examines the process of vertical segregation in this occupation. The focus in this chapter is on the practices which constructed and reproduce gender divisions. Subsequent chapters examine the research material by exploring the discourses which underpin these practices.

By 1984, in the literature on women and computing a contradiction had emerged between those studies which suggest that because computing is a relatively new industry, women who have entered the field are employed on equal terms with men, or at least on more equal terms than in other branches of industry or commerce (Deakin 1984). This argument is based on the view that computing as an occupation emerged at a time when there was a greater awareness of the legitimacy of equal opportunities, so that the institutionalised barriers which exist in other industries, which had their basis in traditional attitudes, practices and prejudice were absent due to the 'newness' of the industry.

The opposite view however is suggested by other researchers (Lloyd & Newell 1985; Morris 1989) who claim that whilst historically women in computing experienced

similar job chances to men, this has now changed. It is estimated that in the 1950s and 1960s the share of women in programming and analyst jobs was around 50% but by the mid 1980s this share had dropped to around 20% (Newton 1991, cited in Rubery et.al. 1992, p80). The argument is that today women in this industry experience discrimination in computing, and that this discrimination is both widespread and deep-seated. Furthermore the traditional pattern of job segregation, which is a familiar feature of women's position in the labour market, is repeated in this industry (see Kraft 1979; Lloyd & Newell 1985; Strober & Arnold 1987). This means that as in other industries women are horizontally and vertically segregated into certain occupations and into positions which are routine, uninteresting, least skilled, have low status and are on the lower end of the pay scale (Hakim 1979; Walby 1986, Crompton & Sanderson 1990; Rubery & Fagan 1995). Men, on the other hand, do the high status jobs, which involve intellectual activity and 'skilled' technological competence. Men in these positions tend to receive above average rates of pay and have good career prospects. A traditional sexual division of labour has therefore emerged in the computing industry. This is particularly ironic given the fact that women were the first computer programmers. Moreover, in what is both a history and an analysis of



the process of de-skilling within this occupation, Kraft points to the fact that,

one of the ironies of programming is that women pioneered the occupation, largely by accident, only to make it attractive to men once the work was redefined as creative and important. The further irony, however is that the men who followed the women pioneers - and effectively eased them out of the industry - eventually had their work reduced into something that was genuinely like clerical labour. It was at this point that women were allowed to re-enter the occupation they had created.  
(Kraft 1979, p5)

#### THE COMPANIES

In order to examine the process of segregation and de-skilling within computer programming, I conducted a series of interviews, from October 1987 to March 1988, in a number of organisations located in the North of England. I gained access to seven companies, five of which are computer software houses of varying sizes, and two in-house computer installations: one a multinational organisation dealing with pharmaceuticals and the other an internationally famous manufacturing company involved with defence.

Software houses are involved with the production of commercial computer applications whereas in-house computing departments develop their own programming systems and support staff. The staff base is usually extremely small, there is a rapid staff turnover and many of these companies do not become established concerns.

Two of the houses in my sample are still established, the others have ceased business. *Radola plc*<sup>1</sup> is one of the exceptions to this pattern as it is a nationally established computing business with the head office in Hull and divisions in Middlesex, Cardiff, and Sheffield. The staff base is correspondingly high: the head office employs 470 workers, Cardiff has 42, Sheffield 46 and Middlesex 147 employees and the total sales figures were in excess of £13,071 thousand<sup>2</sup>. The other software houses in my sample had a staff base of between 7 and 22 employees. All of these companies supply computer systems including systems design and programming services, packaged software. None of these organisations had an equal opportunities policy.

*Ratigan & Co* is one of Britain's largest companies and is owned and managed in this country. The company manufactures products under six main categories: household, toiletry, food, wine, pharmaceuticals, leisure. The household, toiletry and pharmaceutical division is located in Hull. The group's turnover is in excess of £900 million with 80% of sales coming from overseas<sup>3</sup>. The computer programming department however was very small, consisting of eight members of staff, and a month after the research began, this section was closed

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<sup>1</sup> The companies names have been altered.

<sup>2</sup> Source: Business Ratio Plus 1988

<sup>3</sup> Source: Company Report 1988

as the company had decided to contract out their programming needs. This was part of a general rationalisation programme in the Hull division. There was no company policy on equal opportunities for women in the company. The annual reports from 1988 contain references to equal opportunities for disabled people, but there are no details available of the distribution of women throughout the companies<sup>4</sup>. The bulk of the interviews were conducted in an in-house installation which was part of an internationally renowned company who manufactured military aircraft. The computer division of this company produced programming packages covering all aspects of aircraft production, though the majority of the programmers worked in the business systems division.

The military aircraft division is housed on a large site on the outskirts of the city of Hull. Nationally the company consists of seven divisions which produce, military and civil aircraft, army, air and navy weapons, electronic systems and space and communications systems. The company is one of the largest such companies in the world, has a national and international reputation for engineering and had begun to develop into new areas such as spacecraft and guided weapons systems. In 1985 the total workforce comprised about 75,000 people and in 1985

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<sup>4</sup> There was a sharp reduction in employees number in 1987-1988 mainly from the disposal in 1987 of the group's cleaning business. This directly affected employment in the Hull business. The numbers dropped from 1987: 12,600 to 1988: 5,400. Source: Annual Report 1988.



total sales figures were £2,648 million with 36% of sales to the British Ministry of Defence. Total sales were £2,648 million. The division near Hull employed a workforce of 4,500 people who design, manufacture and assemble components for aircraft such as the Hawk, Harrier and Airbus, and repair aircraft in service with the R.A.F<sup>5</sup>.

In March 1984 the corporate personnel department had produced an equal opportunity policy and each division in the company was asked to prepare a discussion paper on the subject. The company had been approached by the Baroness Platt of Writtel, the then chairperson of the Equal Opportunities Commission about the possibility of giving more consideration to the needs of women throughout the organisation. As part of the process of re-appraisal of the operation of this policy it was agreed that I would be able to conduct interviews on the project - gender and computing - and provide a report which assessed equal opportunities for computer programmers in the company<sup>6</sup>.

The interview schedule<sup>7</sup> covered a variety of issues centring on the areas of the nature of the work involved with computer programming as a labour process, the

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<sup>5</sup> Source: Company Handbook

<sup>6</sup> This caused problems for the research project as it tended to associate me with the management. See my discussion in chapter four and for a discussion of the problems with being perceived as a 'bosses man' (sic) - see Willis 1977 and Ramazanoglu 1989.

<sup>7</sup> see Appendix 2 for a copy of the interview schedule.

training and educational qualifications of these workers, and their family and home responsibilities. An analysis of the job descriptions given by both female and male computer programmers provides an insight into the gender differences in relation to two aspects of programming work. So for example, programming can consist of support for standard applications and project work which is usually a specialised programme for an individual client or a new production. Project work is more challenging, dynamic and complex and has more status and prestige in the occupation.

#### **THE JOB: COMPUTER PROGRAMMING**

In order to understand the job of a computer programmer it is necessary to outline some of the related occupations in the computer industry. The best way of explaining these positions, which range from computer engineers through to data-entry operators, is to consider the different jobs involved in the two related areas of computer hardware and computer software. These areas are related to the two disciplines at the heart of these occupations: engineering and mathematics. Hardware consists of those occupations which have to do with either the construction of the actual computer and the workings of the mechanical parts of the machine whereas, software is concerned with the operations of the machine. I constructed the following table in order to outline the range of occupations in the industry.

**Table 3. Range of Occupations in the Computing Industry**

<i>HARDWARE</i>	<i>SOFTWARE</i>
Computer Scientists & Engineers	Computer Aided Design
Computer Design & Manufacturing	Software Engineers and Scientists
Computer Engineers	Data Applications
Computer Communications & Operations	Systems Analysts Programmers
Computer Aided Engineering	Support Staff Operators Data Entry Operators

The only governmental report on the industry was produced by the Institute of Manpower Studies on behalf of the Manpower Sub-Committee of the National Economic Development Office published in 1985 which reports on the supply and demand for computer related manpower (sic). (Anderson & Hersleb 1980). They list the number of people employed in the industry as 180,000 (ibid., vii) and mention the very high labour turnover rates in the industry. The survey indicates that these rates approach 20% for all computer staff, with applications programmers far exceeding this rate. They list the applications programmers as the entry point for the professional grades in the industry and identify staff shortfalls in this area as a serious problem for the industry. The serious shortages of programmers and analysts reported in this survey resulted in the recruitment of programming staff with varying educational qualifications, ranging



from programmers whose qualifications consisted of 'O' and 'A' level passes in computer studies, to those with vocational qualifications organised with the National Computer Centre, Training Opportunities Schemes (TOPS) to those with ordinary degrees and post-graduate qualifications in computer science. This wide variation is reflected in the educational qualifications of the respondents in my sample. The developments in computer hardware from the 1960s has been extraordinary and computers are now used in every manufacturing and service industry. As this report states, computers have,

improved rapidly in terms of programmability, speed, power consumption, flexibility and range of applications, reliability, durability, and above all miniaturisation and cheapness (ibid., p3)

In the 1950s and 1960s, computers referred to as mainframes, were large and extremely complicated, occupied a wide area, and were used only by big corporations and the state, usually the military. Computer users (mainly men)<sup>8</sup> at this time would be able to build, program and operate the machine. A division of labour then begins to emerge when the job of programming is given to women, the ENIAC 'girls' (see below). By the 1970s computers were getting smaller, though still filling a small room, and were increasingly being used by

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<sup>8</sup> There is, at the moment, no historical evidence of the involvement of women in building the machines. There is evidence of women's very early involvement in programming. (see Kraft 1977; Lloyd & Newell 1985).

a range of organisations, but the operating systems were still complicated and require specialised knowledge. These computers were usually referred to as terminals, though usually this type of machine still needed to be networked into a mainframe. By the 1980s personal computers (pc) became widely available, and more importantly, notably cheaper. No expert knowledge is needed to operate these machines as the applications are programmed for easy use (Fisher 1994). These machines are now common place both in the home and in the workplace, and through the growth of the Internet has revolutionised information and communications systems.

These developments increased the demand for programmers, and while the cost of computer hardware plummeted, the opposite happened in software manufacture. The ratio of software, relative to hardware, is almost 90%. This, combined with labour shortage of programmers, has resulted in manufacturers of computer hardware moving over into software production, making it more difficult for small software houses to survive. These costs also resulted in much of the software being encoded into the machines, and the development of more and more assessable programme packages in an effort to reduce the rise in the cost of programming skills, especially programme maintenance costs which can take up as much as 60% of a programmer's time (Fisher 1994, p10). The international division of labour allied with telecommunications is

making it increasingly cost effective and efficient for companies to move software production to India, China and South East Asia. (Heeks 1993 quoted in Webster 1994; Shapiro 1994).

As mentioned above (Rubery & Fagan 1995) one of the difficulties in researching this area is that similar occupations are given different titles in different areas of industry, in commercial and manufacturing industries and between different companies. So for example, the Manpower Report (see Anderson & Hersleb 1985) attempts to provide statistics for staff employed in the industry by classifying programmers under three different headings: analyst-programmers, software programmers, and applications programmers; which taken together comprise 22.2% of computing staff. These divisions can be roughly understood as reflecting a hierarchy in programming which can be related to seniority, from chief (or head) systems programmer to a junior, or trainee programmer. The term systems-analyst has been commonly used from the 1960s for the person who designs and implements a new programme, so effectively they tend to be project leaders. Different types of programmers - depending on the complexity of the programme - would work with the systems analyst and together they would write specified sections of programme. It is extremely rare for only one person to write a computer programme. Computer programmes consist of different elements, and each programme needs an



operating system and an applications programme to name the more obvious requirements. Operating systems programming is more complex and has more status than programming applications. Computer operators direct the computer by either inputting data or simply inputting and cataloguing tapes. Data preparation is where the information is keyed into the machine onto magnetic tape and for which no technical knowledge is required. I constructed the following diagram of the hierarchy of positions inside computing as a guide to the hierarchies in the industry.

**Table 4: Hierarchy of Computing Occupations**

Computer Scientists  
Computer Design & Manufacturing/Production  
CAD/CAM Software Engineers and Scientists.  
Computer Engineers/Data Applications Managers  
Systems Analysts in the area of :  
Computer Communication & Operations  
Computer Aided Engineering  
Computer Aided Design  
Systems Analysts in the areas of :  
Data Processing Applications  
Computer Engineers (Technicians)  
Systems Analysts/Programmers  
Programmers  
Computer Support Staff  
Computer Operators  
Data Entry Operators

This hierarchy, to some degree, disguises the importance of the software end of the computer, in that in the end, the hardware depends on successful software. This places the work of the systems analyst/programmer at the centre of the industry. In theory systems analysts do not write programmes. Rather their role is to break down the job

or application required into a series of instructions which take the form of a flow chart of sequenced tasks. Technically then the systems analyst need have no knowledge of programming. However this is hardly ever the case. Indeed the position of the systems analyst is viewed as part of a career progression for programmers. As Kraft states,

if the analyst/programmer distinction was, and to a large extent remains, crude, tentative, and porous, it proved that programming could be divided into two main categories of more-thoughtful and less-thoughtful work. "Creative" software specialists - for example, those whose work involved relatively little mechanical detail - could then have much of their work routinized, and the fragments thus created parcelled out to less skilled workers. (1979, p7)

It is the case that there is a division in programming which is similar to the process described by Kraft. However the less 'creative' work tends to be done by women and the 'more thoughtful' work tends to be done by men. The fragmentation of programming was much more noticeable when the software was for mainframes or terminal computers. As one woman explained to me, this has changed considerably given the introduction of smaller and more powerful micro computers. She said that with bigger and more cumbersome machines the systems analyst would design a system, split it into programmes

You would have a systems analyst who would design a system, split it into programmes really and then say to all the programmers

"right, you write this programme, you write that programme", whereas now the roles have become a bit more mixed really.

[Extract from transcripts]

Every programmer today would have access to their own machine which means that they can sort out programming problems on their personal computers rather than waiting to access a mainframe. Because of the flexibility now available with the widespread use of smaller and very powerful machines, the jobs have become more interchangeable, though this only tends to occur in small organisations, the more rigid hierarchy described above, still tends to operate in the larger companies. The division described above by Kraft (1979) is organised through this hierarchy rather than through the fragmentation of the work.

Most of the people I interviewed<sup>\*</sup> described their job as analyst/programmer, and all had aspirations to become fully-fledged systems analysts. One company, *Radola*, did not use these titles and the workers who perform programming functions were referred to as systems designers. In another company, *CCola*, there was no such thing as a systems analyst - everyone was a programmer. These job titles have implications for pay rates for programmers. In my sample and nationally throughout the industry there are wide variations of pay. These can be

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<sup>\*</sup> A list of respondents appears in Appendix 1.



related to the size of the organisation, the professional qualifications of the programmer, and local and regional factors on job rates.

The type of programming undertaken, and the hierarchical divisions outlined above depends very much on the particular industry with which workers are involved, and the size of the company. As one woman said:

Because it was such a small company, we used to sell micros and things, just small computers and I was literally doing everything, designing systems, programming, acting as customer support . . .  
[Extract from Transcripts]

In software houses specific programmes are either tailor-made: 'bespoke' to specific customer requirements, or are 'standard' software packages which programmers adapt to suit their customers needs. A 'bespoke' is an original programme designed to a customer's requirement and specifications. 'Bespoke' programming is viewed by programmers as creative and challenging. Joy, one of the women computer programmers interviewed, who worked very hard, putting in extremely long hours, and was ambitious to work mainly with 'bespoke', expressed her preference for this type of programming:

Bespoke stuff, it's a challenge, it's creativity, it's something from nothing. It's yours when you've done it, you get a feeling of achievement.  
[Extract from Transcripts]

This type of original work is increasingly exceptional as more commonly standard software packages tend to be used as a base for specific applications for customers. Usually the software originates alongside the particular hardware recommended and marketed by software houses. The other option is that the same company, the best example of which is *IBM* and *Apple*, produces, markets, designs and supports its own software and hardware. In the case of one of the companies included in the research, *MB Alando*, the firm had at one stage both these sections under one roof and under one company title. This changed as the business grew and developed. Bob, who had worked for this company during both of these phases, explained what happened when the software company emerged in its own right:

There's been a change in the working atmosphere because the new company has become more strict and more rigid. The old company used to have engineers, programme people, salesmen . . . - the programme people didn't make money, which they never did for years, then the engineers made plenty of money to cover it, but the engineers only had the work to do because we wrote the programmes, so everybody carried each other. But now we're just programme people. We've got to make our own money, we've got to keep to time schedules and you've got to make sure people are in line to keep them in check a lot more now. Before it was quite easy going really.

[Extract from Transcripts]

## PROGRAMMING SEXISM: OCCUPATIONAL SEGREGATION AND PROGRAMMING

There is a marked contrast between the organisational culture of software houses and the organisations which have their own 'in house' computer department. Inside 'in-house' computer divisions the programmer's work is chiefly concerned with changing the software packages provided by the company which supplied the hardware, and which has been 'tailored' to suit the needs of the individual workplace. These departments may also devise programmes in order to adapt the computer to a variety of users' needs in the workplace. Differences also exist amongst programmers who work at different levels of abstraction and complexity. The major distinction here is the use of a range of programming languages, from machine code to higher level languages. Machine code is the original programming language, it is therefore the most difficult and the most old fashioned way of producing software and I have no evidence that it is still in use. It is helpful to bear in mind that the higher-level the language the programmer uses, e.g. BASIC, COBOL, PASCAL, FORTRAN, the more basic and less complex the operation. The other point to note is that as women were the first computer programmers, during the 1940s and 1950s, they were using a programming language which requires a high level of abstraction and complexity. The designers who engineered ENIAC, the operational computer built for the United States Defence



Department in the early 1940s, assumed that the job of programming the machine would be a simple clerical operation. So it was given to women. It transpired that in order to programme the machine these women, the ENIAC 'girls', had to devise a 'machine code' which, as Kraft says :

means being comfortable with abstract logic, mathematics, electrical circuits, and machines, as well as some substantive field, such as aerodynamics or cost accounting (1979, p4)

In the course of my research I discovered that the same process appears to have occurred in this country. I interviewed a woman, Sandra, who had worked at GCHQ in the 1960s who told the same story about the early history of computer programming. The computer section employed mostly women, and hardly any men, and they originally programmed using machine codes. She said:

We were Ministry of Defence and were quite distinctly the lower grade, which annoyed us because mostly the girls had Higher Nationals, and had passed degrees. The lads, the people of the Foreign Office, didn't have to have any qualifications at all, and they got more money and special payment for being programmers.  
[Extract from Transcripts]

In the sample of fifty-two programmers interviewed for this research, I met only three women who had worked during the 1950s and into the 1960s, at the level of programming using machine code. At the more basic

programming levels described above there are still divisions into essentially complex and simple programming tasks. What determines the distinction is the amount of work a programmer has to do, the amount of areas on the disc and whether the programme has to access different files and data bases. As one man explained :

I mean if you want to produce several reports or change lots of data on the system, I mean the whole programme - you can have a programme that you have split to five or six places because it just won't run the system. You have to chop it and run piece after piece and it just does so much work like accounting when you get to the month end. You've got to print out all the details off the system and then clear everything down ready for the new month. I mean with something like that, that's pretty well complex and it's not just the complexity of it, everything got to go right. If it goes wrong you've had it mate. There's no going back to it.

[Extract from Transcripts]

## THE PROCESS OF SEGREGATION

On a number of levels the differences between in-house computer installations and software houses are quite marked. One such contrast is the stress and pressure of work. In the software houses the stress was palpable and the situations described below were a common occurrence:

A customer had an old machine collapsing, they wanted a new system working alongside and they did a fortnightly run and it took 28 hours and it stopped after about 22 hours - just dropped out and the three of us were here till half past ten one night finding out what happened, where it stopped

and we actually sent programmes on the telephone lines to start it off.

[Extract from Transcripts]

Computer software companies tend to be more dynamic and highly pressured as compared to the pace of work of the 'in-house' computer departments. The time scales the programmers work to are very tight and people are expected to work at a very high level of pressure all the time. The programmers worked very long hours, including Saturdays and Sundays. One woman who was divorced and whose husband had custody of her two children, told me about the demands of the job,

Well I just wouldn't come in on a Saturday, but I often came in on a Sunday after I've dropped the children off just because I want to get my head down to do something. Then obviously Fridays and Wednesdays, if I had to work late, then I'd have to get a friend to take them: it's best to keep them in a routine.

[Extract from Transcripts]

The smaller the software house, the more furious the pace and the greater the problem. One man explained his working hours as follows:

Well the official hours are 9.00 in the morning to 5.30 at night, 5 days a week, with an hour for lunch. We very rarely have lunch. We work right through and there are Saturdays and Sundays involved as well and it's very rarely that I get away before six, half past six, seven o'clock. The work is always there.

[Extract from Transcripts]



When I asked how often he had to work at the weekends, he replied :

Well what we're trying to do at the moment is cut it down because that doesn't allow us any refresh time as it were and it has been in the past every three Sundays out of four. Because in a small company you see, if you've got the work, you've got deadlines to meet, those deadlines are paramount you've got to meet them. The customer isn't really interested in your problems. You've undertaken to deliver the goods to him, therefore you must do it.  
[Extract from transcripts]

Another man made a similar point:

Whatever happens, the pressure is on for you to get the customer back up and running and that's your job. And you get in there and you've got to go into the programmes, find what's doing and if you can get back and start it up again and come back to the customer.  
[Extract from transcripts]

The demands of the job, on the simple basis of flexibility and availability around time means that a number of women would not be able to participate in the same way as men, given the amount of time spent by women on housework and childcare, (see Church & Summerfield 1995; Charles 1993; Kidder 1981). Yet, the women I interviewed, though they found this pressure difficult to manage at times, did work into the early morning and weekends if there was a job to be finished.

In the last few weeks I've been sort of getting dragged in. It was half past one in the morning one day, so it's a bit stressful when you've got to get up the next day for work but obviously it's not

like that all the time. It's just as well really.

[Extract from transcripts]

Another women commented,

I suppose excitement is the wrong word but yet, it's kind of stimulating. I mean, you know, it can fail for all sorts of different reasons and we just get among it and say this job's failed and just sort of track back and find out, find the error, and try and analyse why it has happened. I mean we had a cracker somewhere last year and it took us a whole week until we solved it

[Extract from transcripts]

Despite the fact that many of the women in practice did work under the same pressure as men, they tended to minimise this rather than boast or brag. The work of Fergus Murray (1993), which is discussed below, supports this observation. In exploring the relationship between masculinity and technology he examined the culture of software development and details both the pressure of the job, and the satisfaction and status acquired by men working under these conditions. He tells of the culture and tempo of project-based work that 'sets it apart from much routinized work'. Quoting a male project manager, he writes:

It is a different mentality. The mentality in admin. is very much nine to five. Here, I mean my God, I come in at eight in the morning, I leave at seven in the evening, and there's still people here. It's a different mentality. If you ask people for a little bit of extra effort you get it. (Murray 1993, p73)

Murray similarly discusses the dilemmas for women workers trying to operate within an occupation dominated by the 'project mentality'. There is an immediate problem for women in that this mentality is shaped by the discourse of masculinity rather than femininity - and the difficulties are exacerbated in the case of women who have the responsibility for childcare. As Murray says, "for anyone with even minimal childcare responsibilities there are major problems" (1993 p74).

When I discussed this dilemma with men, one response was that it was an organisational issue as it would be a problem for women to be working unsupervised outside 'normal' working hours. A more common response is illustrated by the following extract.

Men are more likely to be available for odd hours than women are, because I think most people are conscious of the much more tight families commitments than the men. Yes, I think people anyway would still consider somebody's got to look after the family, probably the wife more than the husband. I suspect it's being in other people's minds that it wouldn't be fair to put pressure on a women to volunteer her for a job if you could avoid it.

[Extract from transcripts]

## THE EMERGENCE OF A SEXUAL DIVISION OF LABOUR

The presumed lack of a 'project mentality' and the implied assumption that you do not have the concomitant 'organisational commitment' militates both against women who welcome and enjoy working in a pressured environment and against women who are unable to work in this way



because of child care responsibilities. As Murray states:

High status work tends to be associated with high profile new software development. It is prized for the inherent challenge it offers and the promotion prospects that follow the successful completion of major projects. (1993, p73)

The exclusion of the majority of women in my sample from this 'high status work' is one of the factors involved in the sexual division of labour in programming, and demonstrates the means by which women are segregated into lower status positions. The process which shapes job segregation in this occupation is the distinction between the 'bespoke' and the standard package produced by software houses. The female programmers I interviewed tended to be either concentrated in or slowly being moved into the area of standard packages. Working with standard programming packages does not have the prestige, status and creativity associated with the work of 'bespoke'.

Bespoke means it's been tailored to suit that customer. You've heard of a bespoke tailor who'll make your suit. We design to the customer's requirement a particular system and obviously my function then is to programme to that specification. That's bespoke.

[Extract from transcripts]

With 'bespoke' the programmer has a high level of customer contact at the beginning of a project. They

would be involved in putting together a proposal which involves the software and hardware requirements of the customer and they would also take responsibility for the staff team delivering a presentation to the customer. As these projects involve substantial sums of money, not only are project teams gaining valuable experience about budgetary systems and marketing skills but they are also involved in high status, exciting and innovatory projects. They will also be associating with people outside the normal scope of their work, and if they control the project, selecting programmers to test the computer system and have overall responsibility for the for the implementation of the software. Some projects can take up to two years to implement. In this way not only do project leaders acquire some managerial skills, but they also have the opportunity to make new contacts and build networks which can lead to other projects. This type of experience makes the person more marketable, more experienced and more likely to gain promotion. In the companies I visited, with two exceptions, project managers were men. The following quote is from one women, Jean, - a twenty-six year old whose job title at Radola was Applications Development Manager, which meant that she was in charge of the software programming staff and the systems analyst staff based at the Hull Office. She describes the importance of the project leader's job as follows:

How it actually works is that, starting right from the beginning we get an invitation to tender, probably from a consultancy company. We would put together a proposal of the type of software and hardware which would fulfil their requirements. Then we arrange a presentation, where we would demonstrate the software. . . . if we're lucky enough to get that contract and actually sign up, then that project leader would control how that project was run, how the development was run and who would control the hardware implementation. It actually would be done by the engineers but it would be the project leader who would control it, who would arrange all the training and support for that company. Again, this would be done by the training team but the project leader is still responsible as the single source of contact for that customer. . . . They would also arrange for any specialist consultancy they might need, and financial or manufacturing systems. So they arrange everything . . . (and) while they're working on that project the project leader is effectively the boss. But then, there's actually the software development and the installation of software which would be done by that project leader's own programmers and he's (sic) got to make sure that he (sic) specifies it to the minute detail. The programmers do the programming and testing the documentation that's actually installed and everything goes in line with the implementation plan. So that's how it would normally work, and now a lot of that work would be done on site with the customer, particularly the specification and it would be very interactive and we don't just go out and find out what the requirements are, we then come back and develop it. It's a two way thing all the time because otherwise you'd find it would go wrong and so at Radola we put a high stress on people being able to communicate reasonably well.

[Extract from transcripts]



## WHERE ARE THE WOMEN?

They are working on the standard packages where simple maintenance programming is generally the only requirement. The work involves supporting customers who may want to make changes or are having problems on a routine application, such as a payroll package which would require low level programming skills. The role of a programmer here would be to alter the programme in line with government changes in legislation. They may also be asked to refine or readjust the standard package in line with the customer's requirements. The packages tend to be used as a base and it is very rare that an actual system would get written from scratch, as in the 'bespoke' process described above.

## APPLICATIONS SUPPORT: 'WOMEN'S WORK'?

Women were also largely confined to the area of computer support. In one company in the sample, *Radola*, this area was dominated by women whose job involved training the customer's staff to use the computer and to understand the software packages. These women were not involved with specialist programming. In another software house the women who were involved with programming standard packages also provided customer support. This type of work was not regarded as prestigious: rather it was described as a large headache. As one man explained:

Support. That's where you get all the earache on the telephone when the customers ring up. I was doing support for over two years and it's enough to drive anyone round the bend.

[Extract from transcripts]

The management view was that women were much more suited to the position of customer support than men, as it was said that they were better at defusing customers' and users' anger and impatience over problems with the applications. One woman described how she was 'ear-marked' for support, and how this area was considered to be the 'dregs'.

They've been trying to push me onto packages since last January and as yet, because of my present work load I've avoided it. I did some of it last January and hated every minute of it.

[Extract from transcripts]

When I asked her why she did not want to work in this area she said:

Everybody wants to be an analyst in the bespoke department because that's where the interest is. That's the really interesting system. You go in, you're meeting people, you design new systems and you're not getting the flack all the time. Because on support all they're doing is ringing in because there's a problem.

[Extract from transcripts]

The majority of the women were very aware of the problem with support work and tried to resist being moved into this area.

It always seemed to be that if a client had a problem it was me that went and sorted it out. Whether that was just a coincidence or not I don't know. I mean I complained

to the director about this at one time. It was a bloke called Ray J, because I felt that Mike was sitting in the office doing nothing all the time and I was running round the country sorting people out you know and I didn't think it was right and Ray agreed with me and that again just seemed to be the way it sort of evolved. Even after Ray had talked to Mike it always used to be that if a client rang up it was "Oh I think you'll be better off talking to Christine" and he'd hand the phone to me which meant that if anybody had to go out it was me because it was me they had spoken to and Ray talked to Mike and told him not to do it as much as he was doing it and to deal with clients himself if he could, but he still did it and I still went out and sorted the clients out. I don't know I think it's just the sort of society that we live in, the way that men are expected to do the work with the screwdriver in their hand and women are expected to talk to people

[Extract from transcripts]

Even women who disliked 'support' and were aware of the practical costs of being ghettoised in this area felt that women were better suited to it than men. Another woman said:

You have to deal with some shirty people, even at top management level. On the telephone sometimes they can be, you know, nasty, the way they speak to you and you've got to hold your tongue a lot of the time. If somebody spoke to me outside of work like that then I wouldn't think twice about retaliating but in work in the job you're doing you've got to have a lot of patience and understanding and not a quick temper.

A.F. Do you know of any man who works around the department who could do what you do?



Not offhand, no. A lot of them haven't got the patience.

[Extract from transcripts]

And some women liked support.

You get more involved sort of with the users and you are looking into systems rather than just writing the programmes

[Extract from transcripts]

There is an interesting contradiction here in that the qualities which are needed to be a good support worker is one that requires a good deal of expertise and knowledge of the programmes and very good communication skills yet this qualities were not particularly highly regarded in the software houses.

Well you've got two parts to your software. You've got the operating system which is machine work in itself and the software we're written, and if it's for anything at all to do with machines, then you've got to know how the hardware works, you know if the wrong lights go on you've got to know what's happening, when to call an engineer, if a disc is going wrong you've got to know what the noises are and things like that. Really your support people should be the most experienced people

[Extract from transcripts]

This is in contrast to the 'in house' computing departments where people who had these qualities were promoted much quicker and were more highly regarded than staff who were simply 'technical'.

#### **GENDER DIFFERENCES IN PAY AND STATUS**

It is difficult to compare the ratio of women programmers to men in software houses and in-house

installations because the organisations are so different. There was also some variation between the software houses which is discussed above. The one common feature is that that all the secretarial and administrative support staff were women.

Radola one of the five software houses included in the research is twelve years old (in 1988) and in comparison with similar companies is considered an 'old', well established company, employed no female programmers. However Jean, the Software Applications Manager is in charge of all the software programming staff and is also responsible for recruitment. She was recruiting programming staff at the time of the interview and despite having eighty applicants for the two positions available, no woman had applied. In the previous five years they had employed only one female programmer. During her interview, Jean made it clear that her attitude to employing women programmers was influenced by the fact that they 'would get married and leave because their husband has moved jobs'. In her discussion of the lack of female computer programmers in the company, she said:

Well up until about a month ago I did have one female programmer. Now, as an individual case, and I certainly wouldn't make this a generalisation, she felt that she wasn't suited to full scale programme development, she just didn't have the knack for it, it wasn't her forte. She actually transferred to a customer support role which suited her own abilities much better.

Now before that I had a female member of staff who had a very high capability which is very unusual I must admit. I've found in my experience here that women like this have been very few and far between and those that I have had have not necessarily been of a high level. Now she actually left to have children. On average throughout the company nationally there's probably 9 male programmers to 1 female.  
[Extract from transcripts]

A survey of computer staff conducted by APEX (1979) indicates the representation of women on the lower end of the hierarchy of computer occupations by the beginning of the 1980s.

**Table 5: APEX (1979) Survey of Computer Staff**

5-15%	of computer programmers are women
10-25%	of computer operators are women
75%-100%	of data preparation and data control staff are women

The same pattern appears again in a 1986 survey conducted by Computer Economics (cited in the Guardian 25.2.1988) which showed that:

**Table 6: Computer Economics (1986) Survey of Computer Staff**

2%	of data processing managers were women
18%	of computer programmers were women
95%	of data preparation staff were women

A similar pattern of segregation is revealed by American research (Strober & Arnold 1987), though here



there are more women in each of the different computer occupations.

**Table 7: Strober & Arnold (1987) Survey of Computer Staff**

5% of computer engineers were women
22% of computer scientists/systems analysts were women
31% of computer programmers were women
17% of computer engineering technicians were women
59% of computer operators were women
92% of data preparations staff were women

From the 1991 Census<sup>10</sup> the following sex ratios within computing occupations are listed and show a very similar pattern of segregation, though unfortunately the figures for computer operators and data processing staff are listed together:

**Table 8: Extract from 1991 Census Computer Staff**

Occupation Title	Total	Men	Women	% female
Computer engineers, installation & maintenance	2090	1968	122	6%
Software Engineers	5857	5083	774	13%
Computer systems/ data processing managers	6628	5397	1231	19%
Computer analyst/programmers	14530	11489	3041	21%
Computer operators, data processors etc.	16055	4793	11261	70%

<sup>10</sup> Source: 1991 Census 10% Sample Data on Occupational Structure and Sex Ratios

Excluding the company *Radola*<sup>11</sup> the other three software houses<sup>12</sup> in the sample showed some variation to this pattern in respect of computer programmers because of the small staff base. *Shields* employees totalled 7 and this was one of the companies in the sample which had no women employed as either programmers or systems analysts. *CCola* employed ten programmers of which five were women. The programmers are divided into three grades; trainee, junior and senior, and women were equally represented in each category. *MB Alando* employed fifteen programmers, of which two were systems analysts, one of whom was a woman, one other woman was a programmer. None of the women in this company were available for interview.

#### SOFTWARE HOUSES

It is difficult to compare these companies with the national picture as the figures are based on small staff numbers. Within the 'in-house' installations, *Ratigan & Co* were dismantling the department and I was able to interview the remaining three programmers. At the manufacturing company much larger numbers of staff were involved.

The category of system designers/ programmers in this company would appear to represent quite a fair

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<sup>11</sup> The total staff base at *Radola* was 470 workers but the breakdown was not made available to me.

<sup>12</sup> The fourth company *Hobsons* was part of a firm of business consultants rather than a separate software house - so I have not included figures for this group.

distribution of women within this computing division, though women are in the lower grades, however on closer inspection it was found that the women were programming in the more traditional female areas such as clerical, payroll and administrative sections rather than in the areas of production, engineering and communications. The Business System Division consists of 155 systems analysts, software engineers and computer programmers, 39 of which were women. I interviewed 37 people from this section, 15 men and 22 women.

**Table 9: BUSINESS SYSTEMS DEPARTMENT**

Occupation Title	Total	Men	Women	% female
Group Leader	12	11	1	8%
Computer systems manager (Senior system leaders)	8	8	0	0%
Computer systems manager (Junior system leaders)	4	3	1	25%
Systems Designers	36	31	5	14%
Senior System Design	19	3	16	84%
Junior Trainee system design	76	60	16	21%
TOTALS	155	116	39	25%
Computer operators	*			1%
Computer data processors	*			100%

Note: \* indicates no real figures available for these groups.

The percentage figure of 25% for women in this department compares to the national and international figures for women's presence in software work (see above Rubery & Fagan 1995; also Kraft & Dubnoff 1984). Vertical segregation is extremely strong in the computer industry



with women dominating the area of data processing, though not computer operating jobs. However these jobs rarely provide an entry into computer professional jobs even for men.

#### **SALARY DIFFERENCES**

The women are earning less than the men. The gender divisions on the different salary scales from all the companies involved in the research are as follows:

<i>Salary Bands</i>	<i>Female</i>	<i>Male</i>
Below £5,000	1	1
£5,000 - £7,000	1	0
£7,000 - £10,000	11	1
£10,000 - £13,000	9	9
£13,000 - £15,000	5	2
£15,000 - £13,000	2	5
£20,000+	0	5
<i>TOTALS</i>	29	23

(In the case of the one male worker who was earning below £5000, he was a student doing a one year placement as part of his degree. The woman however was a highly experienced programmer who on the birth of her child had opted to work on a 16 hours a week part-time basis). From these figures it seems because women are polarised into relatively routine and junior positions in the

department this accounts for the earning gap between women and men.

Overall, Humberside is a low wage economy in comparison to the rest of the country, although males' manual earnings are higher than nationally. Figures from the 1991 census indicate that males on average earn £20,370 per year compared with the national average of £18,720 and women earn £12,662 compared to £13,653 nationally. As the following figures from 1987 and 1986 indicate the salary scales for the respondents listed above were in line with the local average.

**Table 10: Earnings in Full Time Occupations 1987**

	Humberside	Great Britain
<b>Men</b>		
Manual Occupations	190.90 (175.60)	185.50 (174.40)
Non-Manual Occupations	243.20 (220.40)	265.90 (244.90)
All Occupations	210.50 (192.60)	224.00 (207.50)
<b>Women</b>		
Manual Occupations	112.90 (105.30)	115.30 (107.50)
Non-Manual Occupations	140.40 (131.30)	157.20 (145.70)
All Occupations	133.00 (123.60)	148.10 (137.20)

Note: Figures relation to average gross weekly earnings and include overtime and shift payments. Figures in brackets relate to 1986.  
Source: New Earnings Survey April 1987.

In the analyses by occupation from the New Earnings Survey the gross weekly earnings for systems analysts and computer programmers which are classified as social class two are as follows:

**Table 11: Gross weekly earnings for systems analysts/computer programmers:**

Full time Male	Gross weekly earnings 1987	Gross weekly earnings 1991
Systems analysts, computer programmers	Lowest decile 174.4 *	Lowest decile 226.9
Full time Female		232.2

*Note:* There is no listing for female full time systems analysts, computer programmers before 1991.

*Source:* New Earnings Survey 1987 & 1991.

As explained above it is difficult to interpret statistics for computer professionals as different companies used different job titles, so the comparison between male and female computer professional's pay can be misleading, though the indications are that "computer programmer/analyst is a relatively higher paid job for women than for men" (Rubery et.al. 1992, p86).

#### **LOCAL LABOUR MARKET**

The gender composition of the labour market in Hull varies from the national picture. Whilst employment and unemployment in the city of Hull and the local region of Humberside have tended to follow the overall national trend, there is however some variation between the Hull economy and the national picture which also affects the gender composition of the labour market. In terms of the share of total employment, the main differences between the UK and Humberside is that the region has proportionately fewer full-time employees than nationally (58.3% and 62.1% respectively) but proportionately more part-time (27.7% and 25.1% respectively). At the heart



of the overall differences in full time employment is the fact that female full time employment is proportionately lower than nationally while female part-time employment is far more important. Female full time employment in Humberside accounts for 41.1% of total female employment compared to 50.0% nationally, while female part-time employment accounts for 50.7% of all female employment compared to 43.7% nationally. The most striking feature of the local employment situation is the variation with the national rates for self employment. Between 1994 and 1997, it is estimated to have increased by over 13% compared to a national growth figure of 1%. There is also a very small ethnic component to the labour market compared to the national average as is indicated by the following table.

**Table 12: Ethnic composition of Kingston upon Hull**

<b>Ethnic origin</b>	<b>Local Population figures</b>	<b>% of local population</b>
White	250,934	98.7%
Total Non-White	3,183	1.3%
Black Caribbean	137	.1%
Black African	356	.1%
Black Other	369	.1%
Indian	318	.1%
Pakistani	237	.1%
Bangladeshi	235	.1%
Chinese	537	.2%
Other Asian	317	.1%
Other	677	.3%

Source: OPCS 1991.<sup>13</sup>

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<sup>13</sup> Two of the people interviewed for the study were from ethnic minorities: an British born Asian woman and a British born Afro-Caribbean. Given the small numbers involved racism is not discussed in the thesis.

Over the last ten years, the structure of employment nationally and locally has shifted away from the primary, manufacture and construction industries to the service sector. However, in Hull and Humberside this process is happening more slowly than nationally. Employment in manufacturing fell at the rate of 1.1% per year compares to a national rate of 1.9%. In broad terms, the employment structure in the region is not entirely different to that of the national picture but with two major exceptions, Humberside has around 6% more of its employees engaged in manufacturing and around 6% fewer in banking, finance and insurance.

#### IN SUMMARY

It is obvious then that women are not only under represented in relation to their numbers in the labour force in the computing industry but they also suffer inequalities in relation to pay. Job segregation is evident by the emergence of a division of labour around 'bespoke' programming, standard packages and the area of customer support. A number of elements were found to be operating in the different companies which can help to account for this process. In organising these factors I have to some extent followed the list provided by Reskin & Hartmann's study of *Women's Work, Men's Work: Sex Segregation on the Job* (1985) which catalogues research from a range of American companies. This book represents

the findings of the Committee on Women's Employment and Related Social Issues which documents the extent of job segregation in the USA. The factors which were found to be crucial to this process were: cultural beliefs about gender and work; sex stereotypes and occupational segregation; discriminatory acts and behaviour; institutionalised barriers, informal barriers in the workplace and child care and occupation segregation. The next chapter examines these factors.



## Chapter Six

### FACTORS SHAPING SEGREGATION

This chapter examines the extent to which embedded traditions of discrimination have shaped the process of vertical segregation in computer programming despite the fact that both women and men had an estimated 50% share in programming and analyst jobs in the 1950s and 1960s. Not only have the figures for women programmers fallen to approximately half of this figure but organisational practices have lead to a sexual division of labour in computer programming which has resulted in a new category of worker emerging in the industry - the 'help desk analyst', who are predominantly women. The following table demonstrates this trend, and the fall in the share of women in the industry.

**Table 13: Female shares of computer professional occupations 1991.**

	Females as % of occupation		Average age (change since May)		Female earnings as % of male	
	May	Nov.	Male	Female	May	Nov.
Data Processing Manager	3	3	44	41(+1)	95	99
Project Manager	14	14	39	36	97	98
Systems analyst	28	29	34	32	96	99
analyst Programmer	26	25	30	31	99	98
Programmer 1	25	23	28(-1)	30	99	99
systems Programmer	13	13	30(-1)	30	94	93
Operator	15	16	26	28	98	102
Network Operator	39	35	28		91	95
Help Desk Analyst	64	63	30	30(+1)	93	91

Source: Computer Economics, May and November 1991, cited in Rubery, Fagan & Humphries 1992, p 90..

In their interpretation of these figures Rubery et.al (1992) point out that this survey suggests that

the share of women is still falling in the profession: the overall share of women is falling and the average age is rising

suggesting that women are accounting for smaller shares of young recruits. This computer pay survey data provides the best estimate of women's position within the various occupational categories that come under the heading computer professionals. The only occupation where women predominate is "Help desk analyst", an occupational area where women's social skills have presumably been considered an asset. Women are particularly poorly represented in management posts, in operating jobs and in systems programmers posts. (ibid., p81)

Traditional ideas and practices did contribute to the process of vertical segregation in the companies studied and the next section reviews these factors.

#### INSTITUTIONALISED BARRIERS

Institutionalised barriers existed in all of the companies regardless of the type of computing concern. In the software houses, the most established of which had only been a going concern for twelve years, the near total male management had incorporated an organisational structure which was based on largely traditional forms of organising. The only exception in these firms was the apparently 'fluid' nature of the promotion ladder. It was stated by a member of the management team of one of these companies (Radola) that:

There is a loose structure but it's kept very fluid and its kept that way deliberately because it makes us more flexible because we are working in a very dynamic environment and we have to react very quickly. Now if we had a predetermined structure we couldn't do that. In an in-house computer department it's maybe more structured and conventional

and you have to take steps up a ladder at pre-determined times. Now, in this company that doesn't happen. You're judged purely on ability and opportunities that you make for yourself and I think it's true that there are less women who are relatively able or willing, I would say willing, rather than able, to make that sort of commitment to a career and to forcefully promote themselves.

[Extract from transcripts]

Despite the advantages of the flexible system of promotions which was found in software companies, over more traditional practices, this is not in itself sufficient to overcome the other factors which discriminate against women and which structure job segregation. Within 'in-house' establishments the institutionalised barriers have their origins in traditional practices and prejudices, which are consequently more enduring and entrenched. For example, in one company the personnel practices made it extremely difficult for women programmers to return to work on a part-time basis. A woman who had been with the organisation for a number of years, took time out to have a child. After the birth of her child, she hoped to work from home, which technically should be a very easy option for a programmer, given that all they need is a personal computer. Despite the fact that her immediate manager was in favour of this arrangement, the administrative practices of the company could not sanction these 'new' working conditions and proved to be very inflexible on



the issue. The compromise solution reached by the manager of the computer department with personnel was to allow the woman to work in the evenings, which was obviously not very satisfactory from her point of view. At the time of interviewing she said that if this arrangement did not change, and they were unable to allow her to work part-time at home, that she would have to leave the job.

Another woman experienced problems when she applied for maternity leave. She was only the second person to take what she termed 'proper maternity leave' at the company.

A.F. 'proper maternity leave'?

Come back. I was only the second person to do it and as far as I know I'm only the first to do it for the second child, out of choice you know, other than the people that have had to come back to work through, you know, loss of a husband or something like that and I resent the fact that they aren't a bit more helpful in terms of you know, they just pay the minimum. They also, when I told them that I'd be working up to Christmas, they also at one time refused to sign my form because they thought they may be liable in some way. They wanted to check up. So I mean, and that really annoyed me. I was quite cross about that . . . they had no set procedures for maternity. They don't know the rules properly.

[Extract from transcripts]

This woman not only challenged the administrative procedures of the organisation but also resisted

assumptions from some women and some men that she should not return to work.

Well they said how much they disagreed with it, [returning to work after giving birth] you know people that had been my colleagues and to a certain extent friends, made me feel slightly awkward in that they did put forward their opinions on why they thought, you know, that is was not a good idea and why I shouldn't do it. Some just didn't believe that I would, you know, there was one chap that you know believes that maternal instincts are so strong that there's no way, you know, that any women could possibly come back to work, he was a complete idiot mind. So there was a bit of that. I think there was a certain amount of resentment to me having to have a couple of months off again.

[Extract from transcripts]

#### NETWORKING A PROMOTION

In terms of mobility ladders and promotion opportunities, whilst 75% of the women interviewed and 90% of the men stated that they were seeking promotion and advancement, the opportunities are limited by the rigidity of the hierarchical structure. There were a number of marked differences between men and women in the discussions on promotion. The men were quite clear on the question of their promotion chances and possibilities. They could also virtually recite the hierarchy in each company in their immediate areas and also in related areas. They had a fund of stories about promotion and how various people had achieved or acquired their positions. In a discussion of his progress through the company one of the men interviewed mentioned that he

had "lost an empire" when he was outmanoeuvred by men from other departments. Their main complaint concerned the rigidity of the structures, though they were aware that movements in different directions and different areas were possible if not always feasible. Many of them had also considered "freelance" programming and discussed the "huge amounts" of money which could be made in this area. One woman had considered this option and rejected it, and only one other considered it as a serious career move.

The women did not express the same determination or have the same company knowledge with regards to promotion opportunities and the following quotation illustrates a common response.

I'm quite happy with what I'm doing with the amount I've got. I mean, I wouldn't mind taking more responsibility, but as far as work is concerned I'm not particularly bothered about being in charge of people.  
[Extract from transcripts]

The women were much more concerned with doing their present job with a high degree of conscientiousness, in the expressed belief that 'virtue has it's own rewards'. This conscientious attention to detail and consistent hard work was self acknowledged: i.e. the women were aware they worked hard and held a firm belief that they worked harder than many of their male associates. The men also stated that women worked harder than many men



and that women were more patient and methodical in their work. Indeed, the woman from *Radola* who claimed to have problems recruiting women programmers said:

From the women that I have employed they tend to be more methodical than men. I think the women I have had, have been excellent and have been better than the men.

[Extract from transcripts]

Both women and men viewed promotion in terms of increased status. However women also tended to view promotion in terms of more responsibility whereas men tended to concentrate on promotion in terms of a growth in prestige and power. Very little staff development beyond the practical aspects of the job was available to either men or women, and this made the informal and formal network systems crucial for progress and promotion in an occupation. Many of those interviewed made reference to the number of courses available to them which were directly related to the practical aspects of their jobs as programmers. These courses were largely information courses about new software packages and programming languages. There did not appear to be discrimination in terms of access to these courses for women. In the case of one large company whose data preparation staff was totally female, (see figures above for Business Systems Department), little or no staff development or career development opportunities were available. Although on

request, an aptitude test to become a programmer could be taken, this depended on the initiative of the individual woman. The 'received knowledge' in this department, based on the previous experiences of women taking this test, is that it was extremely difficult and beyond the capabilities of the data preparation 'girls'. A number of the women reported to me that,

the aptitude test is very difficult, and in fact, going back to when I first started here there was a girl in our department who did actually do the aptitude test and I mean I can't remember this happening at the time but I've been told that the girl came out of the aptitude test in tears and made a total fool of herself. Now whether that's true or not I don't know, but that's just going on what I've actually been told.  
[Extract from transcripts]

One woman who made the transition from secretary to the business systems department said:

They very meanly put me through a test. There's a rotten old test, I don't know whether you've seen it. I thought it was horrendous, I cried nearly half way through with frustration because I couldn't do it and I thought "Oh God", you know they're going to find me out, I'm not clever enough and anyway you get a new breath half way through and I managed to do three quarters of the paper. The last two questions I made a mess of, well, I just couldn't attempt to do them but when they got the report back I don't quite know how many percent I got so it was quite bad but if you don't get like in the upper 80s they're not interested in you anyway and you can't do the job as a systems designer. I think the report came back with something like, you know, "not a systems designer but consider her for the job of information technology consultant". But they were a

bit mean putting me through it. Ever since I've been here I've always had to prove myself.

[Extract from transcripts]

Jenny, a woman who had made the transition from data entry to programming explained how, despite getting the required mark on the aptitude test, she was not moved out of the data control room for a further two and a half years. She hung on however and when she was finally moved there was still no hurry to set her off down the path to programming, so she had to wait a further nine months before she actually became a trainee programmer. Hence women have to be tenacious and highly motivated in order to challenge traditional practices and unspoken assumptions about women's desires and capabilities.

What can be another 'natural' progression - the move from data entry operator to computer operator - was also closed to these women as they assumed (incorrectly) that women were not allowed to work the twenty four hour shift system operated in the computer section. The policy of the company that women can't work shifts, though not in existence officially, is acted upon, and this has serious repercussions for women who wish to move to gain promotion as it is not possible to be promoted to shift leader if you can't work shifts.

In a discussion, on this issue with Mark, a group leader, with reference to one of the women he said that he did not think she "would have wanted to work shifts".



When questioned further on this he spoke about his assumption that:

I think people were just a bit worried about being able to look after them at night

A.F: Why do women need to be looked after?

Because they've been such a minority I think. I think it's different in a smaller office rather than a big factory

A.F. Women work shifts in hospitals and factories

Well, other places have all got a definite structure of supervisors and there's always somebody at the top to deal with a department. We haven't got that structure. There's a bit of structure in the works but anything in between would perhaps come back to the security people and so . . .

[Extract from transcripts]

## CULTURAL BELIEFS ABOUT GENDER

Cultural beliefs about gender refers to the socially produced distinctions between men and women that constitute gendered processes and practices in work organisations, and sexuality is part of this ongoing process. As Burrell (1992) explains, sexuality and women's bodies are used as grounds for exclusion or objectification. Sexual harassment is an example of how the discourses of gender, sexuality and organisations conflict and can block a women's progress through a company. The point I would make here, is that this is an important aspect of the way women's opportunities at work and women's paid work can be traumatic and constraining.

Only one case of ongoing sexual harassment was disclosed to me during the research and the woman asked me to keep the information confidential. Another woman had reported her section manager for harassment, however she had to do this on a number of occasions before he stopped. She explained how:

He wouldn't take me seriously. He used to pat me on the bum now and again. You know, nothing excessive really, just annoying stuff and he used to make sexist jokes in meetings and to a certain extent belittle me in meetings which I took offence to.  
[Extract from transcripts]

Less overtly sexist mechanisms exist which act in informal ways to restrict women's opportunities at work.

Reskin & Hartmann (1985) explain how it is

more problematic because it is a daily affair is women's exclusion from informal networks in which information is shared and alliances develop which has implications for their learning and performing their job and their chances for advancement. Since male domination of top positions is a structural phenomenon, however, the same processes that tend to strengthen the fraternity of men reinforce the exclusion of women (1985, p54)

A significant number of the men and women interviewed mentioned the importance of such alliances in the progress of their careers. In the areas of computer programming/systems analysts, as in other occupations (see Reskin & Hartmann 1985) these alliances play an important part in career development. There are frequent

shifts of personnel around the different software houses, and staff are constantly being poached, much of which is done through personal contact. Another important factor in the informal culture of organisations is the role of sponsors or mentors. These are people who take others 'under their wing'. Sometimes these relationships are based on friendships or on a shared interest in some kind of sporting activity. More usually they take the form of father and son, or older and younger brothers relationships, and are mostly male. Because men hold a disproportionate number of positions of importance and so few women hold positions with high status so as to be as effective in this way, most available potential sponsors are men. There are also a number of barriers to men being effective sponsors of women. It is not as socially acceptable or comfortable for men to have such relationships with women. Men do not see women as people with which you can have this type of relationship, in large part because of the sexual connotations which are suggested in relationships between women and men. As Harry said to Sally in the film *When Harry Met Sally* (1992) 'men and women can't be friends because the sex part always gets in the way'. There is also the problem of the cultural beliefs and stereotypes which follow women in work. The irony here is that these beliefs about women's 'innate' capabilities, interests and aspirations which can be characterised as the three Cs,



caring, clerical and cleaning, (see Rubery et.al. 1992; Beechey & Whitelegge 1986) are reinforced and strengthened by job segregation. These cultural beliefs about gender and work were expressed by a small percentage of the men I interviewed.

They expounded the view that married women with children should not be out at work, but ought to be at home. As mentioned above one woman who had a child and was on maternity leave with the birth of her second child referred to the fact that some men tried to talk her out of returning to work.

I put a question to each interviewee, asking if they thought that both men and women were equally capable of doing their job. The vast majority of men qualified their initial affirmative response, by saying that the woman who could do 'their' job would have to be "special", that she would "need to project herself", and would need "good technical ability". Women on the other hand responded by saying that a man would have no difficulty doing their job except in those areas of work dominated by women: e.g. data preparation. It was said that men would not have the patience for this job and would be unable to handle the tedium. A large number of men and women interviewed also expressed the belief that men are more committed to their jobs than women as men have greater responsibility because of family commitments and have different orientations to work.

Manju: Men have to work. Women go to work for the companionship

Nick: Men are more ambitious, they respond to power struggles

Lewis: Female characteristics are innate

Christine: At work there is less commitment from women. The overall impression I have is that women are not as interested as men. Women are less interested in the technical side of things.

Robin: Most women don't want a career though. The majority of them don't. They'll probably get married and have kids and probably come back to it. But all the women in our department have either been married and not had kids or are not married. Like Rose is married and she hasn't got any kids so obviously they want careers rather than a family.

[Extracts from transcripts]

Yet, when men were questioned about specific women colleagues they work with, they did not regard them with the perspective on women indicated by their own comments (see above). They referred to their women colleagues as "incredible", "very knowledgeable", "technically very competent", "able", "ambitious", "exceptionally good workers". They did not appear to notice the contradictory nature of these statements which challenges their more general cultural beliefs about women. Similar contradictions were also apparent when the issue of women's aspirations was discussed. For example the stereotype of what constituted good management material tended to be cast in masculine terms in that phrases such

as "dynamic", "competitive", "ambitious", "strong", "ruthless" were used. There was general acceptance amongst the majority of the men that some women were exceptional, and when asked why these 'exceptional' women were not well represented in terms of the management structure, Mike, commented:

The females that we have are more oriented to doing their job and probably enjoying it than they are to getting up the next rung in the ladder. The females that we have are not as willing to engage in the politics and the organisational hassle outside their own environment  
[Extract from transcripts]

A different series of obstacles face women who attempt to combine a career with child care and home care. Evidence from other studies suggests that women are limited to jobs which can accommodate these responsibilities (see Martin & Roberts 1984). Only two women in the sample had small babies and were attempting to combine child care with a career. In the 'in-house' installations this was made easier as the hours of work were routine and the pressure of work was not as great in comparison with the software establishments. In these companies, 29% of the women lived on their own; 15% lived with partners and had no children; 14% were divorced and had no responsibilities for children, as was the case with the 42% who were separated. Given the pressure and long hours of work demanded by these companies it would be extremely difficult for any woman bringing up children on



her own, and as demonstrated by the figures, women with these types of responsibilities did not work in this environment. A small number of the men interviewed disclosed their desire to be more involved in their children's upbringing and they recognised that this was having the effect of limiting their aspirations for career development in the short term. Ian told me of the affect on his life of the birth of his child.

My son has changed me. (His child was 15 months old). My wife and I, our relationship has altered since he came along, as you would expect. I find I'm not willing to put the hours in as much because I do realise that I really want to get home and not only see the boy but see her as well, and relieve her of some of the stress. I will go one of two ways, I'll either draw away from the family life and then throw myself even heavier into work or I will do the opposite.

[Extract from transcripts]

All the women interviewed were conscious of the dilemma they face in combining a career and child rearing. None of the companies in which the interviews were conducted had any specific paternity agreements or domestic leave agreements. Neither did they have any specific maternity policies beyond the legal minimum requirements. In the 'in-house' installations, flexitime was mentioned as a partial solution to their difficulties with childcare responsibilities by many members of staff, and thought to be highly desirable. The women programmers in the company Business Systems Department, told me that there

were insurmountable problems around the introduction of flexitime and job sharing given the structure of the organisation and, as demonstrated by the example of Alison who wanted to work from home, some of these problems can be solved by a more adaptable approach to terms and conditions of work and the needs of people with responsibilities for others. None of the companies had an equal opportunities policy. Jenny said to me:

**If you are career minded, don't have any children. The only reason I had them was because my husband said that he wanted them more than I did, otherwise I wasn't going to have any. Not that I was career minded, not in teaching. I just didn't know what I wanted to do until I came here. I hadn't got a purpose in life and so I got pregnant and this friend said, "You know he's expecting you to change your mind about going back to work". I felt like somebody had put me in jail for twenty years.**  
[Extract from transcripts]

## **GENDER PROCESSES IN GENDERED ORGANISATIONS**

The empirical material I collected as a result of my interviews with computer programmers suggested the process of gender segregation in this occupation. I have detailed a range of factors which are gradually concentrating female programmers in positions of low status with positions of low status with poor promotion prospects. The classic pattern of gender segregation which is documented in a wide variety of feminist sociological and historical studies (see Bradley 1989) would appear to be clearly evident. These findings would

also support studies which document gender segregation in computing (see Rubery et.al. 1992; Lloyd & Newell 1985; Davidson & Cooper 1987; Turkle 1984; Morris 1989; Webster 1994; Shapiro 1994; Green, et.al. 1993). However the explanation and interpretation of this evidence of gender segregation is framed by the feminist orthodoxy which was outlined in chapter three. A good example of this is the following excerpt from an article by Juliet Webster (1994) which describes the nature of gendered relations and technology with reference to the historical development of men's power and patriarchal social relations. She writes:

Feminist analysis has begun to point to the ways in which the gendered nature of society influences technological development, and by implication, the impact of technologies. It has shown that technological artefacts have gender relations actually embedded within them, and also that the institutions of technology, the acquisition of technological know-how, and indeed the very culture of technology itself, have come to be dominated by men at the expense of women. An identification of the processes whereby technology has become 'masculine' provides some explanation as to why the introduction of technologies has had differential impacts on women's and men's jobs, and why it has been experienced differently by men and women. . . . For there are broader issues which shape women's experience of technology in the workplace, and their relationship to paid work in general. The role of women's unpaid labour operates in conjunction with factors within workplaces, including the process of occupational sex-typing and the exclusion of women from technology. Moreover, women's subordination in the



workplace and in the wider society is rooted in a host of broader social institutions, including the family, the education system, and the state. The dynamics of gender and technological change in the workplace form just one component in this complex array of factors shaping women's subordination. (Webster 1992, p321)

The problem with this formulation is that it is difficult to apply it to women who are involved with technology. The historical evidence of women's involvement with technology and their contradictory relations with men at work, some of which is documented in chapter three (see, Pollert 1981; Westwood 1984; Walby 1986; Bradley 1989) is difficult to explain using this model. Why and how do some women resist? Why only some? What explains these differences between women? Rather than explaining the *exclusion* of women from technology and the computing industry, how can their presence be explained? And what are the consequences of their presence?

A number of women in my sample were combining their paid work with child care - why? If women are subordinated by men through domestic labour, how can women's lack of subordination, independence and power in organisations be explained, and what are the implications of the presence of these women for gender processes at work? And what of the men? The men I interviewed during this project were also resisting some elements of gender stereotyping. They were attempting to combine their paid

work with domestic responsibilities and were very complimentary about the abilities of their women colleagues. How can this image of men's relationship to work, to the family and to their women colleagues be accounted for in the rigidity of the story about gender segregation which is given by the feminist explanation outlined above?

As I explained in the previous section, the static nature of this account can be traced to the concept of gender which is embedded in the concept of patriarchy. This account correctly points to the problem of gender segregation; unequal gender relations at work; differentials of pay, status, and unequal gender power relations, but if gender is 'not something that people are in', but is in a constant process of production, and something that,

occurs in the course of participation in work organisations as well as in many other locations and relations', then it is necessary to interpret the practices of gender which give rise to contradictions and complications for this process. (see Acker 1992, p250)

The emphasis in the orthodox approach is on control of women's labour by men. I want to suggest that by attending to the practices within various labour process which are being negotiated, renegotiated and transformed and which suggests contradictions and reversals, the concept of gender as process can help to capture the

changes, ambiguities and flux of the process of gender segregation.

There is another problem with the orthodox account which strengthens the case for attending to the process of gendering - this is the question of agency. This means that

research must look for an understanding of the social construction of gender relations in specific historical contexts. It is therefore necessary to focus not only empirically, but also theoretically, upon human agency, which the concept of practice necessarily presupposes. This, in turn, requires an exploration of how human beings both think and act. (Collinson & Knights & Collinson 1990, p50)

As well as the tendency to see gender as static there is also a tendency to view technology in the same way. Flis Henwood makes an appeal for a transformation of the dominant theoretical frameworks which are used to examine these issues, and argues for the necessity to view,

both technology and gender not as fixed and 'given', but as cultural processes which (like other cultural processes) are subject to negotiation, contestation and, ultimately, transformation. As such, they might be thought of as 'discourses'. (Henwood 1993, p44)

In the following chapters I explore these discourses in order to suggest how these shape the practices of computer programming, and consequently present another interpretation of the process of gender segregation which is suggested by my research material.



## CONCLUSION

The empirical research outlined in this chapter suggests that segregation does exist in the computing industry and amongst computer programmers. The process of gender segregation in the occupation is related to the sexual division of labour which has emerged around different aspects of the organisation of software production. There are a number of issues which influence this process: hierarchical divisions in the industry and the association of women with areas of programming - such as application support - which is rationalised by the notion of 'natural' sex differences - which suggests that women are better suited to, or have abilities for some types of work rather than others. Consequently cultural attitudes towards gender stereotyping suggest the appropriateness of women's labour for some kinds of programming rather than others - like project management. These attitudes influence recruitment and promotion opportunities for women. These practices are reinforced by the differences between women and between women and men in relation to domestic responsibilities. The 'job' model for men and the 'gender' model for women (discussed in a previous chapter) is not simply a problem of sociological or feminist research. These models also operate at the workplace and are constituted by the discourses of organisations, masculinity and femininity. Sexuality discourses also affect the practices of

gendering in the workplace. In this chapter I make reference to two examples of the impact of sexuality in organisations: the problem of men mentoring women, and the issue of sexual harassment. I have suggested that organisational practices need to be examined for their potential discriminatory impact on women, especially those which do not acknowledge the effect of family responsibilities on workers. Sexist cultural beliefs held by men in regard to women's abilities and interest in paid work further encourage the process of segregation.

In the computing industry a number of discourses are operating - discourses on masculinities, on organisations, on femininity, on sexuality, on technology: all help to shape the process of gender segregation in computer programming. Specific organisational practices such as the lack of staff development for women or inflexible administrative procedures (as in the examples given above), will make changes to job segregation more difficult. Common sense discourses of the 'natural' association of sex roles and gender roles (and thus men's jobs and women's jobs) also help to establish gender segregation. Gender hierarchies in organisations, and the associated networks and alliances between groups at different levels in the organisations, encourage and maintain the notion of the

'naturalness' of men's work and women's work. As Joan Acker (1992) points out,

the gender segregation of work, including divisions between paid and unpaid work, is partly created through organizational practices. Second, and related to gender segregation, income and status inequality between women and men is also partly created in organizational processes; understanding these processes is necessary for understanding gender inequality. Third, organizations are one arena in which widely disseminated cultural images of gender are invented and reproduced. Knowledge of cultural production is important for understanding gender construction (Hearn and Parkin 1987). Fourth, some aspects of individual gender identity, perhaps particularly masculinity, are also products of organizational processes and pressures. Fifth, an important feminist project is to make large-scale organisations more democratic and more supportive of humane goals. (Acker 1991, p162-3)

The dimensions of the process of gender segregation which I concentrate on in the subsequent chapters are the discourses which shape the organisation's gendered structure of work and the demands for gender-appropriate behaviours. The study of gender segregation cannot however simply be restricted to women. In order to interpret the positions that men occupy in the informal structures and networks of organisations and their practices in maintaining their positions in programming, it is necessary to explore the discourses which constitute male practices in organisations. What needs to be explored as a result of the argument presented in



this chapter are the practices that shape the processes of gender segregation in the companies I visited for this research in order to explore the extent to which gender segregation is related to: (i) the culture of organisations and organisational discourses; (ii) discourses of masculinity and the culture of masculinity; (iii) the discourses of femininity and (iv) the discourses of science and technology.

## Chapter Seven

### MASCULINITY AND COMPUTER PROGRAMMERS

In seeking to construct an analysis of gender segregation which will avoid a static conceptualisation of gender in this and subsequent chapters I explore the discourses which constitute computer programming. In order to explain how asymmetrical power relations are reproduced, rationalised and resisted at the workplace it is necessary to produce an analysis of gender relations which captures the process of gendering at work. This requires a study of men as well as women and the consequences and contradictions produced by the discourses of masculinity and femininity which shape their social practices. Masculinity and femininity are viewed

as 'product's of discourse and though both are vague concepts can be defined as values, experiences and meanings that are culturally interpreted as masculine and typically feel 'natural' to or are ascribed to men more than women in the particular cultural context. (Alvesson & Billing 1997, p83)

The feminist orthodoxy referred to in the previous chapters produces a view of men as dominant which made it impossible to interpret how the discourses of masculinity and femininity are negotiated, understood and resisted by women. As Wendy Hollway has commented:

One of the puzzling things about feminists' analyses is that they stress men's power and women's lack of power as if they were immutable principles. (1983, p124)

The concept of patriarchy which produced this type of analysis also had an impact on the study of men and masculinity. The first part of this chapter examines this literature and uses it as a base from which to explore the interview material from male computer programmers.

#### **THE CONCEPT OF PATRIARCHY IN CRITICAL MEN'S STUDIES**

The masculinity debates began in earnest in the late 1980s coinciding with the time I carried out the empirical research for this thesis. At this stage the study of men and masculinity from a feminist perspective was in its infancy. There are still only a small number of texts which analyse masculinity from this perspective (Cockburn 1983, 1985; Segal 1990). However the past fifteen years has witnessed a phenomenal growth of studies whose central anxiety is the way men are defined in the dominant discourse on men and masculinity. Only a small section of this literature is based on the recognition that women are subordinated and oppressed by men, with the result that masculinity is recast as a problem for men rather than as a problem for women. There are only a handful of writers in the genre of masculinity studies which acknowledge that men inhabit a structure of power that oppresses women. This was not always the case. Ironically, the early texts in 'critical men's studies' were concerned to display an



awareness of feminist politics, so, for example, an early review of the literature states,

The political meaning of writing about masculinity turns mainly on its treatment of power. Our touchstone is the essential feminist insight that the overall relationship between men and women is one involving domination or oppression. This is a fact about the social world that must have profound consequences for the character of men. (Carrigan, Connell & John Lee 1985, p552)

By making a reference to patriarchy and feminism the writers of 'critical men's studies', as opposed to 'new men's studies', acknowledge male power and women's oppression. In these writings patriarchy functions as a political concept rather than as a theoretical one and it is used, partly, in order to separate 'radical' and pro-feminist writing on men and masculinity from other writings in the genre. As Carrigan, Connell & Lee remark, one way of distinguishing between different writers on masculinity is that some writers,

insist on the importance of the concept of patriarchy; and tries to relate men's oppression of women to the oppression of workers, blacks, and - almost uniquely among Books About Men - gay men (1985, p575)

References to patriarchy is an indicator of a literature which is attempting to be part of the movement towards the creation of radical social change, (Rutherford 1992)

as opposed to those texts which reproduce reactionary and conservative accounts of masculinity. As stated:

At the risk of oversimplification, there are thus two conflicting styles of men writing about masculinity: One celebrates male bonding and tells men they are OK, and the other focuses on issues of power using academic feminist interpretative frameworks. The former approach sells many books and receives much media attention. The latter approach, of which this volume is an example, focuses on the contradictory meanings and experiences of manhood and aligns itself with the women's movement. (Brod & Kaufman 1994, p42)

But these critical studies of masculinities rarely discuss the concept of patriarchy in relation to the conceptualisation of gender which pervades feminist critiques of men and masculinity. Rather than making a link between the concept of masculinity contained in feminist analysis of patriarchy they explore the construction of specific forms of masculinity and fail to analyse the impact on women of gendered power relations. Though the reference to 'patriarchy' indicates an acknowledgement of women and power relations, there is no attempt made to theorise how masculinities are constructed in relation to discourses of femininity - in order to devise a theoretical framework for the study of gender relations rather than simply masculinities. The point I want to make here is that the idea that there are a multiplicity of masculinities supports my argument that the conceptualisation of masculinity which flows from the concept of patriarchy owes more to an ideological version

of masculinity than to the actual lived experiences of men. It is crucial to emphasise here that I am not suggesting that there is no relationship between feminist patriarchal analysis of men and masculinity and the behaviour of men. In other words, there are gross inequalities surrounding gender power relations. Rather my argument is that the notion of masculinity which flows from the concept of patriarchy is 'hegemonic masculinity'. That the view of men and masculinity which appears in the feminist orthodoxy on gender segregation is *this* discourse on masculinity. This is a discourse which positions men as strong, virile, powerful, dominant, and technical. Yet men are not homogeneous - which is why the notion of masculinities is more useful than masculinity as the differences between men which give rise to different types of masculinity also produces contradictory and complex practices at the workplace and elsewhere which will differentially affect the process of gendering at work. However these masculinities are constituted by a dominant discourse on masculinity and it is to this that I now turn. In order to examine this 'hegemonic' discourse, it is necessary to review the emergence of the literature on men's studies.

#### **THEORISING MASCULINITY**

In an important article which provides the basis for a theoretical rather than a descriptive account of masculinities, Carrigan, Connell & Lee (1985) elaborate



the concept of hegemonic masculinity. Their starting point for a discussion of masculinity is not patriarchy but rather the conceptualisation of gender, namely 'sex-role' theory, which still continues to dominate the debates on sex and gender in sociology. Through a critique of role theory this seminal article began to lay the foundation for a theory of gender which is dynamic rather than static, and set the framework for the study of gender as a process rather than as a structure. This analysis of the sociology of gender which predates the emergence of second wave feminism establishes the theoretical connections between traditional sociological writings on men and masculinity, the 'new men's studies and feminist analysis of patriarchy.

The paper begins by evaluating the growth of 'new men's studies' from 1971 to 1985 and provides a useful outline and discussion of the themes which dominated the literature between those dates. The article discusses the focus on the social construction of masculinity in the texts and presents a summary of the conflict men experience with traditional masculinity. Some of this conflict is expressed in terms which echo feminist writings on the experiences of women. Some writers refer to the way they are oppressed and alienated from mainstream masculinity and the strategies they follow in order to gain 'liberation'. Carrigan, Connell & Lee (1985) make the point that very little of this literature

is radical in the sense of being politically directed in relation to the concerns of feminism, rather:

The central theoretical proposition of the 1970s masculinity literature, even if it sometimes remained implicit, was that men are oppressed in a fashion comparable to women. But the oppressor was not taken to be women (except in the view of the right wing of the men's movement . . .). Rather, it was taken to be the male role.  
(1985, p567)

This emphasis on the 'male role' Carrigan, Connell & Lee attribute to the dominance of Parsonian functionalism in the sociological analysis of sex and gender. Functionalism states that there is a shared societal consensus on values and norms of social behaviour without which society could not function. According to this perspective socialisation is the process by which men and women learn rules (social roles) which enable them to behave in socially acceptable ways within a society. The concept of 'role' is used to conceptualise the relationship of individuals to society. It is not only functionalism which stresses the importance of roles and socialisation. For example, the symbolic interactionists, Berger & Luckmann, state,

Roles appear as soon as a common stock of knowledge containing reciprocal typifications of conduct is in process of formation, a process that . . . is endemic to social interaction. (1966, p92)

Sociological perspectives will differ as to the prescriptive or normative stress on structure and agency in the analysis of social roles. In functionalist analysis sex-role theory has a tendency to view masculinity and femininity as scripts that are learnt in order to enable individual men and women to carry out their respective gender roles<sup>1</sup>. The content of masculinity is learnt through the various agencies of socialisation, the family - for functionalists the primary site of socialisation - and via the education system, religion, work, and the state. The concept of sex roles and socialisation dominates textbook sociology and is used to explain gender divisions and gender relations. Gender inequalities are explained through an analysis of the social construction of gender differentiation through socialisation. An example of this type of analysis can be illustrated by the following quote from a well known introductory sociology textbook,

**Parents may sometimes be unaware that they treat their sons differently from their daughters; at other times they may find themselves doing so against their own intentions. A set of interviews with**

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<sup>1</sup>The following quote from a section of Talcott Parson's analysis of the family demonstrates his view of women's role and his thinking around the impact of women's increasing participation in paid work:

"It seems quite safe in general to say that the adult feminine role has not ceased to be anchored primarily in the internal affairs of the family, as wife, mother and manager of the household, while the role of the adult male is primarily anchored in the occupational world, in his job and through it by his status-giving and income-earning functions for the family. Even if, as seems possible, it should come about that the average married women had some kind of job, it seems most unlikely that this relative balance would be upset; that either the roles would be reversed, or their qualitative differentiation in these respects completely erased" (Parsons & Bales 1956 as quoted in Beechey 1978, p162). Beechey's article is a useful outline of Parson's functionalist analysis of women.



feminist mothers revealed that - despite their avowed intentions to allow children to develop with minimal regard to conventional gender roles - boys (though less so girls) were often raised in sex-stereotyped ways. (Van Gelder & Carmichael, 1975 quoted in Bilton, et.al. 1987, p187) (see also Giddens 1995, Haralambos & Holborn 1990)

Sex-role theory skews conceptualisations of gender, and the attributes associated with masculinity and femininity, towards the notion that these are *fixed roles* which are learnt, either well or badly, depending on the quality of the socialisation. Any abnormality in the performance of role, for example, homosexuality rather than heterosexuality is 'abnormal', 'dysfunctional' and deviant. Boys and men learn a script called masculinity and they either learn it well, or not; whatever the case may be; women also learn a script called femininity - again either well or not. As Carrigan, Connell & Lee (1985) point out, 'conflicts' in masculinity are analysed by some writers as incorrect socialisation and/or the lack of male role models<sup>1</sup>.

In the history of sociology functionalist analysis has been widely criticised for its inability to theorise social change and social conflict and for the claim of consensus in relation to shared values and norms. Sex role theory is also unable to explain either role

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<sup>1</sup> The notion pervades the current discussions of an underclass and the 'problem' of single mothers.

conflict or social change in relation to gender roles and the social relations of gender. As Carrigan, Connell & Lee point out, "Sex role theory cannot grasp change as a dialectic arising within gender relations themselves" (1985, p580).

#### THE CONCEPT OF GENDER IN FEMINIST SOCIOLOGY

This discussion of the problems of conceptualising gender in terms of sex-role theory helped me to understand the conceptualisation of gender which is embedded in the concept of patriarchy. It is the notion of sex-differentiated gender roles which pervades this concept that is the basis for the theoretical problems outlined in the first three chapters of the thesis. These theoretical problems can be traced to the conceptualisation of gendered sex roles that is embodied in patriarchal analysis which produced these theoretical and analytical dilemmas. I began to realise that sex role theory has dominated not only 'mainstream' sociology but also feminist sociology (see Abbott & Wallace 1990). From its inception, feminist analysis took the hegemonic discourse on masculinity and referred to it as the male role. In contrast to functionalism, feminist analysis emphasised the dysfunctional character of the role and argued that the 'sex-role' assigned to women (traditional discourse on femininity) which is said to complement the male role, is also dysfunctional and oppressive. Functional/ and dysfunctional are not terms which are

used in feminist sociology; rather the emphasis is on the conflict women experience with the male role. All feminist perspectives, whether liberal feminism, socialist feminism or radical feminism (see Tong 1989) analyse and challenge the content of the roles/scripts that women are expected to both internalise and reproduce. Rather than constructing a critique of the conceptualisation of gender in terms of sex roles, feminist sociology criticises the conflicting and oppressive elements of the sex-roles into which women are socialised. Feminist analysis describes the ways by which women are subordinated, oppressed and conflicted by the prescriptive and normative scripts of masculinity and femininity. However this theoretical model reassembles a static conceptualisation of gender and makes it difficult to analyse not only social change in relation to gender relations but also the way women resist, negotiate and challenge the dominant discourses of femininity. Moreover, this way of theorising gender reproduces a discourse on men and masculinity and a discourse on women and femininity which contains aspects of a traditional, (hegemonic) and reactionary discourse on gender. Even when writers such as Cockburn (1991) attempts to use gender as a relational concept not a static one - the framework established by patriarchy skews the analysis towards viewing gender relations in terms of gender difference, as oppositional rather than as contradictory



and inter-related discourses. Her book which explored men's resistance to sex equality in organizations by its very title positions women and men as oppositional. Though she problematises gender relations at work much more usefully and successfully than any other writer in the field an analysis of the fluidity of gendering at the work is missing from her analysis. Despite the subtlety of her analysis part of her concluding chapter reaffirms the feminist orthodoxy of male power and women's subordination described in chapter three. She writes:

Men reward women for sexual difference when they are in their proper place; penalise them for it once they step into men's place. These are the means whereby men control women. They exert a masculine cultural hegemony that makes it unlikely that women will willingly forfeit men's approval, will identify with each other or with feminism. (1991, p218)<sup>1</sup>

As Beechey explains in her discussion of Cockburn's work, that although her work is "wonderfully insightful" she still retains the dualism of a patriarchal system interacting with capitalism as the basis of her theory of gender so that her categories "are rather all-embracing" (1988, p57). The problem with dual system theory has been discussed in more detail in an earlier chapter. It is the problematic use of patriarchy which sets up the

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<sup>1</sup> In this formulation it appears as though men control whether or not women become feminists. In my view this is giving too much power to men. Based on my discussion of the discourses of femininities in chapter nine it could be argued that it is this discourse, not men, that influence some women's perspective on feminism.

category of gender as static which is the issue here. The consequence of using the sex role framework is that it elaborates a static and abstract interpretation of gender differences and gender relations that makes it difficult to interpret and analyse the actual activities and power of women in different social contexts. As Carrigan, Connell & Lee point out:

The result of using the role framework is an abstract view of the differences between the sexes and their situations not a concrete one of the relations between them. (1985, p580)

It is important to conceptualise gender not as something which pertains to sexed bodies but rather to conceive of gender as "the set of effects produced in bodies, behaviours, and social relations" (Foucault 1990, p127) .

#### THE CONCEPT OF HEGEMONIC MASCULINITY

Carrigan et.al. (1985) developed the concept of 'hegemonic masculinity' as an attempt to introduce a more fluid and dynamic approach to the study of masculinity. In light of their critique of sex role theory they argue that,

What emerges from this line of argument is the very important concept of hegemonic masculinity, not as "the male role", but as a particular variety of masculinity to which others - among them young and effeminate as well as homosexual men - are subordinated. It is particular groups of men, not men in general, who are oppressed within patriarchal sexual relations, and whose situations are related in different ways to the overall logic of the subordination of women to men. (1985, p587)

Throughout the article the importance of male homosexuality is cited as providing a route into understanding masculinity and gender relations. The sexuality of gay men challenges the discourse on heterosexuality which is a strong element of hegemonic masculinity in that men - 'real' men - that is, are only interested in heterosexual sex. Historically, of course, this has not always been the case. As the authors state:

A passion for beautiful boys was compatible with hegemonic masculinity in renaissance Europe, emphatically not so at the end of the nineteenth century. In this historical shift, men's sexual desire was to be focused more closely on women - a fact with complex consequences for them - while groups of men who were visibly not following the hegemonic pattern were more specifically labelled and attacked.  
(1985, p593)

Why this desire, heterosexual desire that is, takes the form of male dominance and women's subordination is not examined or discussed anywhere in the article despite the authors insistence that "hegemonic masculinity is centrally connected with the institutionalisation of men's dominance over women" (1985, p592). The lack of explanation here of the reasons why hegemonic masculinity should take this form is one of the problems with this attempt to produce a new sociology of masculinity and gender relations. It is also important to note that masculinity is theorised with reference to the way masculinities are subordinated by and structured in



relation to hegemonic masculinity. The authors do not seek a way of theorising masculinity in relation to femininity - the emphasis is exclusively on masculinity<sup>4</sup>. Another weakness is that the article does not provide a very precise or sharp definition of the concept of hegemonic masculinity. The definition which is offered is one which is defined in relation to the critique of role theory, and there is no elaboration of the composition of the type of masculinity which is both hegemonic and dominant. Instead of an adequate definition of hegemonic masculinity there is throughout the paper the rather casual assumption that it can be understood as either 'traditional' or mainstream 'masculinity'. The usefulness of this concept however is that it allows one to conceptualise not only different types of masculinities which are structured by, or have a relationship to hegemonic masculinity, but it also enables one to grasp the ways by which this relationship can take the form of resistance, subordination, collusion, rejection, or acceptance. Whichever form the relationship takes, the concept enables one to understand the way hegemonic masculinity creates problems and contradictions (the infamous, crisis of masculinity) for different groups of men as they struggle to act as 'men'

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<sup>4</sup> This point is critical for the distinction between men's studies, women's studies and gender studies. The concept of gender as process means that it is not possible to understand gendering at work doing only women's studies or men's studies. The study of gender segregation needs to be explored from within gender studies.

in different social contexts. In order to elaborate the concept of hegemonic masculinity and to provide an illustration of the similarities between the sex role theory and the construction of men and masculinity in the concept of patriarchy I have constructed a typology which represents an outline of this discourse. This is used purely for the purpose of attempting to present an outline of the discourses and practices which indicate the cultural beliefs which are associated with men.

**Table 14: Typology of the Hegemonic Discourse on Masculinity**

IMAGE	OBSSESSIONS	OCCUPATIONS	TRAITS
<i>Powerful</i> <i>Strong</i> <i>Big</i> <i>Single</i> <i>Handsome</i> <i>Hirsute</i> <i>Muscular Body</i>  <i>Stands in a certain way</i>  <i>Sits with legs apart</i> <i>Wears Trousers (metaphorically &amp; Figuratively)</i> <i>Stands alone</i>	<i>Sex -</i> <i>Heterosexuality</i> <i>Pornography</i> <i>Power</i>  <i>Physical activities</i> <i>Sport</i> <i>War</i> <i>Outdoors</i> <i>Technology</i>  <i>Public responsibilities</i>	<i>Paid Work</i> <i>Skilled</i> <i>Technical worker</i> <i>Manual worker</i> <i>Mental labour</i> <i>Manager</i> <i>Writer</i> <i>Scientist</i> <i>Engineer</i> <i>Surgeon</i>  <i>Paternal authority</i> <i>Power</i> <i>Control</i>	<i>Independent</i> <i>Rational</i> <i>Cultured</i> <i>Competitive</i> <i>Brave</i> <i>Virile</i> <i>Sexually active</i> <i>Violent</i> <i>Controlled</i> <i>Repressed</i> <i>Superior</i>  <i>Power &amp; Control: in relation to</i>  <i>-emotions</i> <i>-other men</i> <i>-women</i> <i>-children</i>

It is this discourse which organises and structures the modes and varieties of masculinities which are 'performed' by men and the one which creates confusions,

contradictions and 'crisis'. This discourse tells a particular story of men and masculinity, but it is an idealised and ideological account of the social construction of masculinity. Nevertheless this typology enables one to appreciate the way different groups of men, for example, gay men, re-represented certain aspects of this discourse. The writings by gay men on masculinity opened a space whereby the difficulties with hegemonic masculinity began to be exposed. In order to provide one example of the way masculinities interact<sup>9</sup> with the dominant discourse on masculinity, I want to take the discourse on the male body and demonstrate both the contradictory nature and the power of the dominant discourse on masculinity. The first point to note is the relationship between body image and the other categories listed in the typology. As Connell (1987) states,

The meaning in the bodily sense of masculinity concern above all else, the superiority of men to women, and the exaltation of hegemonic masculinity over other groups of men which is essential to the domination of women. The social definition of men as holders of power is translated not only into mental body images and fantasies, but into muscle tensions, posture, the feel and texture of the body. This is one of the main ways in which the power of men becomes 'naturalised'. (Connell 1987, p85)

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<sup>9</sup> I am using the term 'interact' here as a shorthand for the forms of resistance, subordination, collusion, rejection, acceptance which I referred to earlier in the text. I would also add that these practices create confusions and contradictions.



But not all men can achieve this type of body image, they may be small, fat, lack muscle tone or whatever, or they may resist the notion that their gender/masculinity is constructed through this body image. A different type of resistance and negotiation is the 'macho-style' adopted by gay men (Weeks 1985), and the emphasis on physicality in gay culture. As Richard Dyer explains:

By taking the signs of masculinity and eroticising them in a blatantly homosexual context, much mischief is done to the security with which 'men' are defined in society, and by which their power is secured. If that bearded, muscular beer drinker turns out to be a pansy, how ever are they going to know the 'real' men any more? (Dyer, as quoted in Weeks, 1985, p191)

The concept of hegemony is useful in that it allows one to theorise the dialectical interplay between the contradictions, negotiations and resistance to this discourse on masculinity and discourses on femininity and the experiences of women and men. At the same time the notion of discourse enables one to grasp how the subjects of this interplay, the *sexed bodies* of women and men, are *fixed* by a discourse rooted in biology. It appears as if hegemonic masculinity refers to an observable stable subject - a biological body. It is this notion of the fixity of biology which gives such power and legitimation to this discourse on masculinity and to the corresponding discourse of hegemonic femininity. These discourses appear to refer to 'natural' differences, and seems

'true' and 'fitting' and thus 'common-sense', though the recent literature on bodies and technology would indicate that it is no longer possible, if it ever was, to conceive of biology as a fixed, or stable category (Grosz 1994; Butler 1993; Haraway 1991). The point here is that the dominant, patriarchal hegemonic discourse on men and masculinity assumes this fixity to biology. One of the distinguishing features of a man is his penis, and 'real' men engage in heterosexual sex with their penises - but as the quote from Dyer indicates - they don't. There is no stability to hegemonic masculinity either in terms of its referent - the male body- or in relation to the way masculinity is experienced by men. Some men reject the idealised male body as part of their identity as men. Their view of masculinity will tend then to stress other elements of this discourse, for example, a particular type of occupation. It is the 'hegemonic discourse' which is always in flux or in 'crisis' and it is no longer possible, (if it ever was) to theorise men and masculinity assuming a stable hegemonic masculinity. The discourse of hegemonic masculinity is composed of a number of inter-relating but distinct discourses - discourses of the body, discourses of work, discourses of sexuality - all of which shape men's practice and attitudes towards themselves, other men and women. Thus rather than refer to the discourse of hegemonic

masculinity it is necessary to consider the different discourses which it contains.

The problems with the conceptualisation of gender and men and masculinity which I have discussed thus far in this chapter did not unfortunately set the framework for my interviews with the male computer programmers. As I explained in the introduction the interviews were conducted before I had worked through all of the theoretical problems with the feminist explanation of gender segregation - a framework which had shaped the interview schedule. This meant that I was not as alert as I needed to be to the process of gendering in the various workplaces I visited. I believe now that my research method would have still presented problems for exploring this process, but even within the limitations of this method - a sharper intellectual clarity of gender as process would have forced me to ask different type of questions, much more directed to issues of masculinity and sexuality at the workplace.

Two key areas of the discourse of hegemonic masculinity were discussed with the male computer programmers I interviewed - these are the social relations that constitute their paid work and their relationship and attitude to domestic labour in the home. I used these two areas to structure my discussions with men as I investigate the extent to which work is a central constituent of men's subjectivity and subject



positions as men<sup>6</sup>, and the contradictions for their relationship to domestic labour and childcare responsibilities.

#### IS PAID WORK A PRIMARY PART OF HEGEMONIC MASCULINITY?

One of the most consistent themes which occurs and reoccurs throughout much of the literature on masculinity is the centrality of paid work to men's working lives and to the construction and reproduction of masculinity. The importance of work identities to male identity is demonstrated by a large number of studies. David Morgan (1992) has recently revisited classic sociological accounts of men at work and produced a reading which attempts to highlight the subtext of gender 'hidden' within these texts. The studies he examined include, Weber's *The Protestant Ethic and the Spirit of Capitalism* (1930), Whyte's *Street Corner Society* (1955), and more recent modern classics such as Nicholas & Beynon's *Working for Capitalism* (1977). Morgan attempts to ask feminist questions of the material, and states that his reading has "been shaped by a particular understanding of gender relations, one which has derived largely from the feminist critique of patriarchal institutions and practices" (Morgan 1992, p70). Despite the problems, discussed above, of using this framework, some

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<sup>6</sup> I was trying to switch between the assumptions of the 'work' model for men, and the 'gender' model for women (Fledberg & Glenn 1984) discussed in chapter three. Therefore I inverted the work and gender models, presuming a 'gender' model for men and a 'work' model for women.

interesting ideas emerge from this account. In particular, the relevance of the separation of home and work to hegemonic masculinity is given a particular emphasis in Weber's analysis and definition of capitalism. Weber believed that the growth and development of modern capitalism is dependent on the separation of waged work from the work of the household, as the household would contain traditional and affective ways of thinking and acting as opposed to the calculating rationality necessary for the world of business and commerce. To quote:

The modern rational organisation of the capitalistic enterprise would not have been possible without two other important factors in its development: the separation of business from the household, which completely dominates modern economic life and closely connected with it, rational book-keeping. (Weber 1930, p21-22)

Morgan discusses the impact of this separation for men in terms of the different contradictory aspects of masculinity which he relates to Weber's notion of the 'spirit' of capitalism. He contrasts the notion of machismo, with its underlying presumption of sexuality and sexual conquest, to the ideas of self discipline and rationality which are central components of the spirit of capitalism and are pivotal to a specific, mainly middle-class professional construction of masculinity. The contrast amongst men of different classes in relation not only to their acquisition of masculinity but also the way

in which maleness is manifested within the different cultures is also discussed. Morgan suggests that the contradictory aspects of masculinity can be traced to different experiences men have at different times in their lives. So, for example, the notion of self-discipline and sacrifice separates off married and family men from single men. The latter group would place an emphasis on sexuality and virility in order to establish their masculine identity.

This analysis is also suggested by my research material. There are clear differences between the men in my sample in relation to the aspects of hegemonic masculinity which shaped their attitude to work and gender relations in the workplace. Of the twenty-three men in my sample, sixteen were married with children; only one was married and childless, the rest were single and either living alone or with parents. Though we never discussed sexuality, virility as an aspect of this discourse is expressed in a number of ways. We talked about cars and careers. One single man told me that he had moved around software houses because he 'desperately' needed a car. He told me about the problems he was having with his 'old banger' which he was deeply attached to, but could not afford to run. So he wanted a company car for 'running about in' but he was very particular about the type of car. Different type of cars were associated with difference hierarchies in the



organisation, so this man was seeking promotion in order to acquire a 'good' car, i.e. a status car. The single men were generally more interested in money and their level of pay than job satisfaction. They were also more motivated by the excitement of 'something new' - which involved either changing companies or on the lookout for new challenges, actively seeking more responsibility than either the older men or the majority of young women in the sample. One man told me that his "ambition was endless". Though he was careful to point out that this did not mean that he was "computer crazy" and though he was only twenty four years of age he said that 'techies' tended to be "the young lads, who were computer crazy, eat and sleep it and read every piece of computer thing published". The fear of boredom and the desire to have an exciting job were continually used as a criteria for an evaluation of men's work, they were always looking for something 'different' in order to retain their interest in their work. This energetic approach to work manifested itself in acquiring useful information about the company they worked for, with an eye to changing their position in the organisation, usually by seeking promotion. The following conversation is very typical. One man, Nick, told me that after dealing with applications programming for four years he wanted to move on.

**I did it for four years and I'd had enough.  
I was looking to get off . . . I had a**

chat with one of the guys in operations, and he said that there was a vacancy going so I made all the moves, enquired about the job and it sounded very interesting. It was totally different to what I'd been doing and if I'm going to get on as far as computing terms go I think it's a good idea to have done a wide range of things.

A. F. When you say 'get on' what do you mean?

Climb the ladder whether it's on a technical level or whether it's on a managerial level. I don't know yet, I haven't decided which route I'm taking, but the more experience you have, the more areas you know about, I believe stands you in better stead for the future.

[Extract from transcripts]

With very few exceptions all of the men I interviewed were very knowledgeable about organisational details: the structure of the hierarchy, the distinctions between different work titles; and had devised a useful network for keeping in touch with what was 'new' in the organisation. For the majority, job progression, job satisfaction and intellectual excitement were critical aspects of their attitude to work. They explained that differences between men can be traced to their 'drive' and this will affect the importance they put on: (i) their level of pay, (ii) excitement and challenge of 'managing' projects or acquiring 'technical' knowledge or (iii) the intellectual stimulation of taking responsibility. One man admitted that what attracted him about taking responsibility for projects was having power. When I asked what this meant to him, he said that he liked to "have some control over what's going on,

rather than somebody else controlling what I do".  
[Extract from transcripts].

As will be demonstrated by the next section, men with children, especially younger men were more likely to question the contradictions of these attitudes for their domestic lives. But generally it appears that their work is central to their subject positions. Different aspects of hegemonic masculinity shape the options they choose at work but the notions of excitement, challenge, and stimulation are significant in that they can be related to the idea of 'drive' which can be associated with, as Hollway tells us, "the production of meanings concerning sexuality" (1984, p231) and the discourse of male sexual drive which is another critical element of hegemonic masculinity. The interview material would then appear to indicate that though work occupies a central position in hegemonic masculinity, for the majority of the men interviewed this centrality is related to excitement, power and control, and thus linked with the male sexual drive discourse. This suggests a different interpretation to the position which emerges from the 'new men's studies' interpretation of masculinity and paid work, which is usually discussed with reference to the notion of crisis, rather than sexual excitement. This material also points to the process of gendering at the workplace.



## DISCOURSES ON PAID WORK AND HEGEMONIC MASCULINITY

In order to explain the contradictions of hegemonic masculinity for men, the writers on the topic have a tendency to concentrate on different aspects and practices within the various discourses. Some writers analyse the ways in which masculine identities and subjectivities are shaped by sexuality, 'race', class and by different cultural experiences, see for example, Brod & Kaufman (1994); Segal (1990); Connell (1983). Other writers Chapman & Rutherford (1988), Metcalf & Humphries (1985) emphasise changes in hegemonic masculinity in relation to sexuality and attempt to assess the implications of these changes for gender relations. Whereas, Brittan (1989); Tolson (1977); Morgan & Hearn (1992); Collinson & Hearn (1994) emphasise the centrality and importance of paid work and men's occupations for an understanding of men and masculinities. In their analysis of changing masculinities they stress structural changes in the organisation of the capitalist labour process. According to these writers, the pressure both for change and crisis in relation to masculinities can be traced to the same source - changes in the nature of work, both in middle class and working class occupations; changes in the structure of the labour market; the type of jobs that are available to men, the addition of women to the labour force and the lack of availability of paid work (Connell 1991; Willis 1977). The increasing demands

for equal treatment from women and the development of global capitalism is discussed in terms of a loss of dignity and increased alienation at work, and as fracturing hegemonic masculinity. The shifts in public and private patriarchy which, along with the growth of women's involvement in the labour market, and the development of women's liberation are key elements in the explanation for the crisis of masculinity thesis. As Brittan explains:

Today the 'crisis of masculinity' is, . . . much more severe because of the tremendous structural changes in advanced industrial societies. Moreover, the crisis is theorized and discussed in academic journals and texts; it is given reality in the media, and it is preached about in churches. Reasons for its magnitude have been attributed to the rise of feminism, the collapse of the nuclear family, and the consolidation of a hedonistic materialistic culture which celebrates the sovereignty of individual desire. More important, however, is the belief that women are not only beginning to dominate some sections of the labour market, but that they are also moving into positions of real power in government and industry. (1989, p180-181)

An analysis of the miscellaneous discourses that make up hegemonic masculinity is beyond the scope of this thesis. So whilst remembering the manifest connections between all the different aspects and practices which make up the discourses of masculinities, I want to concentrate on the relationship of men's paid work to their masculine identity. I want to explore the idea that it is in fact

the power of this discourse which makes it difficult for some men (such as the male computer programmers I interviewed), to become more involved with household tasks.

#### **CONFLICTING DISCOURSES: HEGEMONIC MASCULINITY AND DOMESTICITY**

The cultural distinction between what is considered men's work and women's work and the strong link between paid work and male identity, and hegemonic masculinity may account for the resistance on men's part to domestic labour which is indicated by the responses from men to the questions on domestic labour considered below. This in turn reinforces and reproduces hegemonic discourses on gender.

In this section I am concentrating on the responses from men who had children, rather than the single men interviewed. I found that there was a tremendous reluctance to talk to me about their involvement with domestic arrangements, particularly housework - and this contrasts not only with their ease in talking about work but also their willingness to discuss their contribution to childcare. The defensiveness and sometimes hostility to my questions on housework, was continually expressed by the faltering responses, and the constant requests for clarification on the meaning and usefulness of these questions. Very often astonishment was expressed at the fact that I was asking men a series of questions dealing with the issues around childcare and housework.



Generally there was a lack of awareness of how much is involved with the running of a home, even when children are not present. This can be illustrated by the extract from an interview with Keith Parker, a fifty one year old with four children, only two of whom, an eleven year-old and a sixteen year-old, were still living at home:

Talking of involvement with the family. When you say bringing them up, if they were young children, say under five then I could quite easily perceive a different direction to your question, because a woman tends more to be the primary influence. But for instance with the younger lad, the sixteen year old, we have mucked in, we go out rambling, and walks and swimming and things like that. The youngster goes swimming as well and she now is coming out on the rambles and walks so I . . . try and do things with them whereas with the two older ones I was perhaps more divorced from them . . . How relevant is this to programming?  
[Extract from transcripts]

There are aspects within the house, for instance my wife will, . . . because she's working quite a lot, she's probably working more hours, fiscal hours, than I am. For instance, she doesn't get in until about three o'clock in the morning'. That's very, very tiring. She's actually shattered in the morning and of course, I would say, in the housewife terms does the washing, the ironing, the shopping. I like to go shopping with her because that's one of the tasks we can do together. She won't let me touch the ironing although I can do it. Washing, well these days it's no problem you just open the washing machine, put it on a particular programme and I'm quite capable of doing that. I'm quite capable of cooking, but being a traditionalist my wife doesn't like me to do it. Well there was a

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' His wife is a manager at a night-club

period of two years or so when I did everything, . . . , I'm capable of doing it, it's a question of whether it's easier to avoid the aggro by not doing this than to try and force the issue. Does that answer the question?

[Extract from transcripts]

The men usually began by telling me that I should be talking to their partners if I want to know about their contribution to the house - who they said "would probably contradict" their interpretation of their involvement and of their appropriation of family responsibilities. They were untroubled by how little time they actually spent on housework. It was very obviously not a priority for them. They did however resist the notion that they spent very little time on household chores. Though some men looked at me apologetically the majority tended to emphasise the contribution they made. There was a general tendency, when the question was pressed for them to indicate that they contributed quite a "fair bit" of time to the running of the home, though they spent very little time on housework. Responses to my request for details of their contribution ranged from a singularly honest "I do the odd job" to the more typical "I do the washing up, and I put the kids to bed when she's out". The following sequence of quotes gives an illustration of these responses.

A.F: What about housework how many hours do you do a week?

I suppose I do a fair bit actually

A.F. Do you?

Yes, wash the pots etc.

A.F. So, you always do the washing up?  
It's shared between us, she either washes  
and I'll dry

A.F. And the cooking?

Oh, yes, she cooks usually, yes . . . If  
she's ill, I'll do the ironing and stuff .  
. . I mean, I get home, have my tea then  
there's the dog to take for a bloody walk  
isn't there. I do all the dog walking  
practically.

A. F. Do you?

Yes, well she takes it out during the day  
if she's got to get the kids from school,  
but normally on a night I do it.

This type of response is a good illustration of the way  
that these man were oblivious to the amount of time that  
is needed to organise a household. When I asked if they  
could provide me with a approximate figure for the number  
of hours and specific tasks which they undertook, it  
became clear that their input tended to be very minimal.  
So, for example, David a thirty three year old with three  
children<sup>1</sup> said of his contribution around the home:

I do the washing up. Until last week I  
helped put the kids to bed. Both the kids  
and saw them all get into bed. Alison,  
that's my wife, is involved in quite a lot  
of the same things in the church that I am  
which means we swap, which means that I  
will put the kids to bed and she'll go out  
and do some of the other things, so I'm as  
competent at putting them to bed as she is,  
- not quite as competent but I would do a  
good job.

A. F. Not quite as competent?

Yes. Well bathing three at one time is not  
easy when there're sort of all under three.  
It takes a fair amount of effort by  
yourself . . . I find it hard work. In one  
sense it's challenging. So I wouldn't

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<sup>1</sup> His wife used to be a school teacher and was not a full time housewife. He said that they  
had discussed the possibility of part-time work for her when all the children were at school.



decry that I think that it's an important role to take on. In one sense it is more important doing that role than me working . . . because I could get a job elsewhere, whereas bringing up the family has a more continuing aspect.

[Extract from transcripts]

A distinction needs to be made here between men's role in childcare and their role in housework. There was an overall awareness of the need to be more involved in childcare and from a number of men they expressed sadness about their inability to be more actively involved. They expressed pride and pleasure in their relationships with their children and on many occasions expressed regret for the fact that they are missing out on their child's development and growth. This view was more prevalent from younger men with children, but not always, as the following indicates. Ian, twenty nine years old, with a fifteen month old son said they he did very little "actual" childcare. The majority of men then clearly operated within a very rigid and traditional sexual division of labour and made no apology for this. Mark, aged fifty three, with two grown up children, whose partner worked as a full time secretary said that she took total responsibility "for the housework and that sort of thing". One man used the presence of domestic technology as the explanation for his lack of contribution to the domestic division of domestic labour in his home.

A. F. You said you were married. Does your wife work?

She's a dressmaker and curtain maker. She's only been doing that the last two or three years'.

A. F. Housework? How many hours a week do you do?

I'm trying to match with my wife but I don't know if I'm going to achieve it though. We don't seem to have a lot to do. It's reduced since the kids left. I don't know how many hours. Washing the pots, doing a bit of cooking. I don't do any washing. I don't know . . . I suppose maybe about three hours a week.

A. F. How many hours does your wife do?

Well she's obviously done a lot more in the past but now we've got an automatic washer and a microwave. . . . She does the washing and ironing and things. She still does a lot of things for our daughter. She does a lot more than I do, maybe ten hours a week.

[Extract from transcripts]

These contradictory and ambivalent attitudes towards childcare and housework correspond to similar findings in some of the literature on men and masculinity. The research would also indicate that the 'feminist orthodoxy' on men's control of women's labour and subordination in the home is still salient. However I want to argue even from my small sample that there are differences between men especially in relation to responsibility around childcare which produces conflicts for the discourse of hegemonic masculinity. The next section reviews some of the statistical evidence on the division of labour in the household, and though the evidence is slight, there appears to be some changes

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\* His son is at Cambridge university and his daughter lives nearby

amongst men in their attitude to childcare and household responsibilities. The research evidence which is outlined below would indicate some change in men's engagement with childcare, and with the day-to-day drudgery of housework.

#### **SEXUAL DIVISION OF LABOUR IN THE HOUSEHOLD**

Some of the evidence on this topic is summarised by Lynne Segal in *Slow Motion* (1990). In her analysis of the changing perspectives of men to fatherhood from the inter-war years to the present day, she considers men's desire to experience a more involved relationship with their children. She quotes a number of studies which would support the view that men's domestic involvement is limited to their concern and interest in children rather than with the support of the women in caring for the home. This is despite the increased involvement of women in the labour market. The numbers of women, especially married women working have increased dramatically since the second World War.

In America in 1948, 38.5% of all women aged between sixteen and fifty years of age participated in the work force. By 1987 this percentage had increased to 68.6% (see Crosby & Jaskar 1993). If these figures are broken down to consider the numbers of married women with children who are working, it appears that in 1987, 66.7% of all women aged twenty five to fifty four years of age with a child 18 years or younger were employed, compared



with figures of married women working in 1920 when only 9% of all household had two wage packets. Despite the increase in the number of married women with children doing paid work the research on the division of labour in the home shows that between 1965 and 1975 husbands in America increased the time they spent on housework from an average of 81.4 minutes per day to an average of 82.5 minutes per day, an increase of just over one minute a day. (Crosby & Jaskar 1993, p145).

Research by Berk (1985) which specifically examines the contribution to household tasks of men in families where both the man and the woman are working full time found little difference in the amount of housework done by the man. In 1976, 353 husbands were selected to keep diaries of how they spent their time. It was found that those men married to employed women devoted *four minutes more* per day to household tasks than did men married to housewives. By 1987, further research revealed that this figure had increased to "10 minutes more per day on childcare than other fathers if they were white, and sixteen minutes more per day if they were black" (quoted in Crosby & Jaskar 1993, p146)

In Britain, the change in employment rates for married women shows a similar pattern. In 1951 the number in paid employment is 21.7%; by 1971 the figure had changed to 42.3% and by the 1980s the rate for married women's participation in the labour market had

reached over 50% (see Beechey 1986, p50). Ann Oakley (1974) provides a comparison of data on housework hours which show that on average in Britain in 1951 women were doing seventy-two hours of housework per week. By 1971 this figure had increased to seventy seven hours per week. The difficulty of interpreting the research on the domestic division of labour is due to the lack of consensus on the definition of household tasks. Also as Judy Wajcman points out,

A major problem with most time-budget research is that it does not recognise that the essence of housework is to combine many things, usually concurrently. This has a profound bearing on the interpretation of time spent in childcare and the apparent growth of leisure time. (1991, p94)

Recent figures show that, on average, a 'husband' will do 5.28 hours of housework a week where he is the breadwinner, and in the case of all couples, 'husbands' will do 6.57 hours a week. The *Women and Employment* survey collated by Martin & Roberts (1984) indicates that nearly three-quarters of 'working' wives do all or most of the housework, and this remains true even for the 54% of the women who work full time. The *British Social Attitudes Survey 1988* stated that even for couples with no children at home, the bulk of household work is still done by women and, overall, the position has hardly changed in the last few years. This is indicated by recent figures on men's contribution to household tasks.

There is no information given in these surveys as to the extent to which these households use nannies, cleaners, etc., and figures on the number of households who used paid help for domestic labour was not available. The tables are used here simply to indicate the extent to which women continue to have responsibility for housework and childcare.

**Table 15: Division of household tasks <sup>1</sup>, 1983 and 1991**

Great Britain	Percentages					
	Actual Allocation of Tasks					
	1983			1991		
	Men	Women	Shar	Mn	Wm	Share
Household shopping	5	51	ed 44	8	45	d 47
Makes evening meal	5	77	17	9	70	20
Does evening dishes	17	40	40	28	33	37
Does household cleaning	3	72	24	4	68	27
Does washing and ironing	1	89	10	3	84	12
Repairs household equipment	82	6	10	82	6	10
Organises household bills and money	29	39	32	31	40	28
Child Rearing <sup>2</sup>						
Looks after sick children	1	63	35	1	60	39
Teaches children discipline	10	12	77	9	17	73

<sup>1</sup> By married couples or couples living as married  
<sup>2</sup> Data for 1983 relate to 1984  
Source; Social & Community Planning Research (Social Trends 25:1995)

I mentioned above that there are slight shifts in men's involvement the household, and these figures indicate how slight they are. These surveys show that men had greater involvement in some household tasks in 1991 than they did in 1983. The percentage of men who



prepared the evening meal increased from 17% in 1983 to 28% in 1991, and there is an increase in men's doing the household shopping. The recent survey also attempting to discover the extent to which gender perceptions of these tasks had changed and this is indicated in the following table.

**Table 16: Gender Perceptions of household tasks 1991: <sup>1</sup>.  
Great Britain** **Percentages**

<b>How Tasks should be shared</b>			
	<b>Men</b>	<b>Women</b>	<b>Share</b>
Household shopping	1	22	76
Makes evening meal	1	39	59
Does evening dishes	11	11	75
Does household cleaning	1	36	62
Does washing and ironing	-	58	40
Repairs household equipment	66	1	31
Organises household bills and money	17	14	66
Child Rearing <sup>2</sup>			
Looks after sick children	-	37	60
Teaches children discipline	8	17	73

<sup>1</sup> All respondents were asked how tasks should be shared. Those who were married or cohabiting were asked how tasks were actually shared. Only married and cohabiting couples with children under 16 living in the same household were asked about child rearing.

Source; Social & Community Planning Research <sup>10</sup>

The survey does not provide a breakdown of responses according to gender, but despite this limitation it appears that people believe household tasks should be shared much more, with the exception of washing and ironing for women and household repairs for men. These tasks reflect assumptions about women's work and men's

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<sup>10</sup> See the Social Focus on Women (ed.) Jenny Church & Carol Summerfield. (1995) (London; HMSO) Published 8.8.1995.

work which are so familiar in the production of meanings concerning masculinity and femininity. These assumptions are also part of the process of gendering at work as they produce contradictions for women and men as illustrated by the following extracts from two of the women interviewed.

I think a lot of men see their job as more important than the home and so they're looking for something that interests them and if they want they can get on and have promotion and I think men feel it's sort of about their manliness, their job, it's part of a man. I think a job is part of him. The home sort of thing, to a lot, to most women I would say it's just part of something they do, most get married and have children and when they've got children it's something they do to bring in extra money so they can go to Spain for holidays or whatever, you know. It's not so much, it's an extra to a woman rather than sort of part of her

A.F. Is that how you feel about your job

No, not really because I feel, I'm quite involved with the work, you know, I'm quite willing to put in as much overtime as I have to, if necessary, you know. I was here till half past seven last night. I started at half past seven yesterday morning and was here till half past seven last night. I'm quite involved with my job. I feel, to me it's quite an important part of my life. It's important to me to get some sort of satisfaction out of it, but I haven't' always felt like that. And my husband's quite supportive because he's told the bank he wants to stay within the area so that I can still work here because he knows I like it and I get quite a lot of satisfaction out of it, you know and he is quite prepared to say, "I'll forego promotion".

[Extract from transcripts]

I know of women I work closely with who are of the opinion that women certainly with young children shouldn't work, that it's very wrong for them to be at work, they should be at home, with the children. I don't know people who believe it's wrong for women to work, just for a mother

I mean we treat it as a bit of a joke, because I know their opinions and they know mine but I suppose I was surprised at the people who did feel that strongly, that it was wrong you know for a woman to have a career if she's got children, that her place is in the home, but everybody's entitled to their opinion, they know mine, and I know theirs and I would, if I had children, I would go back to work and I've made that opinion known

[Extract from transcripts]

One of the young men interviewed did not appear to be conscious of his assumption that women were responsible for the home.

I suppose on the whole women work less hours as a rule. If they're married or ought like that it's not as easy for them to just stay behind when something wants doing until 11.00 o'clock, you know, it's not the kind of thing. It's more, because, I mean they have more to do in the home I suppose, really, so in that respect it's more demanding, but not impossible, I mean, I wouldn't say so. I mean Jean for example she works, well more hours than I do anyway. I suppose she's single, so it's different

[Extract from transcripts]

Another man of a similar age stated,

I think if you're going to have children you ought to have children and stop work until the children are at an age where they can look after themselves

[Extract from transcripts]



In a majority of interviews the discussion on the sexual division of labour in the home was analysed in relation to 'society' and 'people in general' and there appeared to be a confused awareness of the contradictions of these sentiments with working relations and practices, as the following extract illustrate:

One of the problems I've found, well not problems, but one of the things I do find happening is quite often you're questioned by men as well as women because you're not married. You know, there's something the matter with you. You know "why surely it's the done thing in society it's acceptable to 99% of women, why not you"? And then you get the other type of men who joke about it and say "Oh, you've done the right thing, I should have done that" even though you know damn well they don't mean it. No, I know there's a lot of women I work with who are married and there are certain men who think that, you know, their role is at home and I suppose a lot of men's can't understand why women don't want to do the role at home like, as the norm in society.  
[Extract from transcripts]

Despite the changes as indicated by the surveys on the division of labour in the home there appears to be little movement in relation to housework notwithstanding the increased activity of women, especially married women, in the labour market. It is important to note here that the shift in men's involvement with childcare relates to only certain kinds of activities and generally they avoid the more monotonous, day-to-day maintenance of child rearing and feeding. It appears that many men are more involved in the leisured aspects of childcare, so

they take on some of the interesting and pleasurable activities. So, for example, some will wheel the child in a pram in public, (something which previous generations of men found difficult as it challenged their notion of masculinity) and this is now a common occurrence (see Rutherford 1992). Many men will play with children in the park, take them to and from nursery, take them out for the day, bath them, read to them and generally take an interest and concern in their growth and development.

It appears to be the case that the traditional division of labour inside the home is still very strong around some areas of domestic labour and this is reflected in the responses of the male computer programmers. Martin and Roberts (1984) found that a substantial number of women and a high proportion of men thought that "a women's place is in the home" and that 50% of all the respondents thought that "a husband's job is to earn the money: a wife's job is to look after the family". *British Social Attitudes* survey in 1988 found a similar pattern in that 63% of men and 51% of women surveyed thought that married women with children under school age ought to stay at home (Jowell, Witherspoon & Brook 1988, p200).

It seems clear from these surveys that women are still largely responsible for the running of the household. It is women who do the cooking, cleaning,

washing, shopping, and take on the major responsibility for childcare. Whilst men's contribution appears to increase marginally if a woman is in full time paid work and if there are children, the evidence indicates that men continue to consider domestic labour as women's work. Men regard their contribution as helping women rather than taking full and equal responsibility (Oakley 1985; Martin & Roberts 1984; Charles 1993). If this situation prevails contemporary developments on home working could worsen the situation.

The increased trend towards the use of technology in the home is a factor that blurs the distinction between the spheres of 'business' and the 'household' which Weber (see above) deemed to be so crucial for capitalism. Technology in what some commentators call the post-industrial society has lead to rapid changes in both the nature of work and individual experiences of paid labour. It is now possible for computer programmers to work from home, though it is still very limited. Only two of the women I interviewed worked mainly from home using information technologies. Depending on the type of occupation and on communications technology (e.g. faxes, electronic mail etc.), it is perfectly feasible for some workers to work in this way and it is a small but growing trend. The white collar trade union MSF (Manufacturing, Science, Finance) has produced a checklist for negotiating home based teleworking arrangements with



employers. Monica Blake (1994) in an article on teleworking in the nineties argues that at the present time ten to fifteen per-cent of the workforce is engaged in telework. Garhammer and Gross (1993) conducted a study of teleworkers which found that they spent more time than other workers on childcare (quoted in Mundorf, Meyer, Schulze & Zoche 1995). These trends, though at present, limited to middle class professionals and the self-employed have important consequences for technologies and gender in relation to families. There are two famous example of firms using homebased workers in computing in Britain - FI International which is entirely staff by home based workers and ICL which has the flexibility to support permanent staff with children to become homeworkers (Rubery et.al. 1992).

A number of organisational practices discussed above; e.g. the practice of not allowing women to work shifts; the lack of flexibility on home working; the expectation of long and open ended working time requirements coupled with the assumption that women would not be able or willing to work these hours; the assumption that women had 'natural' helping skills which made them more suitable for support work rather than project work; demonstrates the importance of organisational discourses for gender segregation. These practices reinforced assumptions about gender attributes which had implications for men's subject positions and

their resistance to housework. The relationship of these practices to the discourse of hegemonic masculinity help to explain why men are so resistant to an equal division of labour over household task. Yet this resistance is rarely a feature of the literature on masculinity. Rather in these texts the emphasis is on masculinity at the workplace rather than either on domestic labour or gender segregation at work and the implications of this for the study of gender at work.

#### **SHIFTING DISCOURSES: MEN AND MASCULINITIES**

In a manner that parallels the early production of feminist texts, from the late 1970s there has been an outpouring of books on men and masculinity largely describing how men feel, think, act, and understand masculinity. And just as it is difficult to discuss the category 'woman' without qualification in terms of class, 'race', sexual orientation, disability, age, ethnic origin, and culture, in a similar way it is equally difficult to discuss men and masculinity without talking about masculinities. Increasingly the 'new men's studies' became the study of masculinities rather than masculinity. The concept of multiple masculinities which refers to the diversity of forms of masculinity comes out of the analysis of the lived experiences of men as described in these texts. The concept of masculinities challenges the dominant discourse on masculinity and the model of men and masculinity which dominates the writing

on gender, work and technology. The 'new men's studies' texts describe the problems and contradictions experienced by men as they try to negotiate, resist and accommodate the 'hegemonic' discourse on masculinity. Through the descriptions there emerges not only the idea of the multiplicity of masculinities, but also the problems and stress masculinity poses for men; and the complications of acquiring and maintaining their gender identity. The impetus for the growth of the 'new men's studies' was the reaction of pro-feminist men to the powerful critique of men and masculinity from second wave feminism. However this soon gave way to the 'crisis of masculinity' thesis and this shifts the debates away from an engagement with feminism to an exclusive concentration on men, (see the discussion in Brod & Kaufman 1994; Collinson & Hearn 1994). Many authors, especially, Tolson (1977); Carrigan, Connell & Lee (1985); (Connell 1985, 1987, 1991, 1995); Hearn (1985, 1987); Brod (1987); Brittan (1989); Heard & Morgan (1990); Rutherford (1992); Brod & Kaufman (1994); point to a number of structural changes which occurred in industrial capitalism from the 1960s onwards that lead to this 'crisis.' The central features of these changes are usually taken to be the widespread application and ascendancy of technology; the subordination of the market to bureaucratic controls; increasing specialisation in paid work; the decline of manual occupations; de-skilling and proletarianisation



across a range of 'professions' the increased participation of women in waged labour and shifting values around sexuality and gender identity. As Tolson writes:

For all men, particularly within certain fractions of the middle class, the post-war experience has been disturbing. There is a contemporary 'problem of masculinity'. . . despite the institutionalization of male supremacy, and behind the masculine social presence, individual men are beginning to lose some of their self-confidence. Partly, the sheer complexity of the modern state sets firm limits on personal authority. Even at 'the top' a successful careerist cannot simply rule by personal charisma or domination. And partly, the sexual tensions of the 'sixties, effects of the 'permissive society', have undermined the masculine 'presence'. In a consumer society, sexuality is publicized, criticized, compared. It is not so easy for men to maintain the pretence of sexual bravado. (1977, p16)

Thus the failure of men to engage with housework and the slight changes which are evident from the research on men's involvement with childcare can be analysed in terms of shifts in the discourse of male occupations and paid work and the relationship of this discourse to the one on domestic labour. And it is the clash of these competing discourses which can explain some of the paradoxes and contradictions evident in the responses from the men I interviewed. The shifts in the discourse of men and work can be traced to the changes in the labour market in respect of job security, deskilling, 'flexible working'

and unemployment. These factors have meant that the vast majority of men can no longer expect job security or have any certainty that their chosen occupation/professional is in any way essential or significant. This according to a number of commentators has weakened men's confidence and power in relation to the public sphere of capitalism. For example, as Tolson states;

For the disillusioned male careerist, this myth of 'domesticity' has become his last remaining source of support. Against the anxiety of his professional 'crisis of confidence' he will still make domestic plans, direct operations, project himself into the future. As husband and father, he is the subject of an ideology to which his wife and children are the objects of his concern, his protection, his authority. And his focal position is maintained by a continuing economic power - the material reality to which the ideology corresponds. (1977, p95)

Housework, then, comes up against two powerful discourses which shape masculine identity. The centrality of paid work for men's masculine identity (which includes strict notions of what constitutes men's work), and the organisational pressures of work in capitalist societies. Both of these occupational discourses keep in place the rigid sexual division of labour in the home. As Tolson said, 'Manhood' is achieved only at an emotional distance from the domestic world' (1977, p50). The contradictions experienced by men in relation to their working life, make their investment in the family more acute and complex in terms

of the role this plays in upholding their masculine identity.

#### **MEN, SACRIFICE AND PAID WORK**

What needs now to be explained is why this 'turn to domesticity' does not lead to equality in relation to domestic labour. It is clear from workplace studies, and there is some evidence from my interview material, that the importance of paid work for men, particularly married men, is related to the notion of areas of responsibility and self-sacrifice especially towards their children. And single men, in a similar fashion to single women, are aware that their attitude to work will have to change when they marry. The sense of responsibility and sacrifice undertaken by men for the welfare of their families is a critical factor in their self identity and their interpretation of masculinity, and informs their views on paid work and domestic labour. To quote one of my respondents:

We obviously decided when we had children that one day my wife would want to go back to work, but there was obviously the problem of looking after the kids, ... so she worked evenings and weekends - and then there was this opportunity to go back into the bank, one day a week, which although it crossed our boundary of what we wanted to do, we wanted to wait until they were completely back to school both of them before we actually entertained anything on a full time basis

[Extract from transcripts]



There is a clear indication in this quote that life for this man and his partner was organised around their concern for their children. Many of the men I interviewed demonstrated this type of concern, interest and attention in relation to their children. For them, they fulfil their *family responsibilities* by taking on the 'sacrifice' of doing paid work. It is both this notion of sacrifice and the idea of different areas of responsibility which enables them to maintain a contradictory attitude to domestic labour. As Andrew Tolson comments,

The extent to which definitions of gender interpenetrate attitudes to 'work', is not often fully understood. For it is not simply that sexuality enters into the division of labour, differentiating 'men's' and 'women's' jobs. Nor is it a matter merely for legislation, to be reformed by 'equal pay' and 'opportunity'. For men, definitions of masculinity enter into the way work is personally experienced, as a life-long commitment and responsibility. In some respects work itself is made palatable only through the kinds of compensations masculinity can provide - the physical effort, the comradeship, the rewards of promotion. When work is unpalatable, it is often only his masculinity (his identification with the wage; 'providing for the wife and kids') that keeps a man at work day after day. (1977, p48)

The interviews I conducted would not support the contention in Tolson's quote that this turn to the family is purely a response to 'unpalatable' work. The men, for the most part, clearly enjoyed their jobs. They appeared

to be aware of more choices and options in the way they could combine work and family; the public and the private. One man describes the changes in his life with the birth of his son:

My wife and I - our relationship has altered since he came along, as you would expect. She was very determined to keep her job - she has over 200 people she is responsible for. She found that very rewarding and what we tend to have - was not an open relationship in the common sense - but I don't suppose it's even strange - a relationship where we appeared to meet after work, and we happened to live in the same house, and on a weekend we happened to go about normal business in the accepted manner. And now I find I'm not willing to put the hours in as much because I do realise that I really want to get home and not only see the boy but see her as well, and relieve her of some of the stress ... I will go one of two ways, I'll either draw away from the family life and then throw myself even heavier into work or I will do the opposite, draw away from work and carry on and start a more full family life, but the time when men seem to run out of steam and out of ambition, all that's past.

[Extract from transcripts]

The study by Theo Nichols and Huw Beynon (1977) of men working in a chemical factory, although focused on the attitudes of the men to changes in the capitalist labour process and the impact of class relations of these changes nevertheless provides a good illustration of the contradictions experienced by men in reconciling work and family responsibilities:

Take Jack Steele. He just lives the work. You know, he has just become it. You see him outside, even at home with his wife and kids, and he is not as much at ease there

as he is in the work situation here. I think it's a pity if you lose all interest in things except work but perhaps it's inevitable. I don't know. I don't really. Perhaps it will happen to me. Perhaps that's what you've got to be to be a plant manager. (1977, p101)

Nichols and Beynon interviewed an Irish man named Michael who said that the purpose of work for him was to provide for his four girls, to give them a good start in life by enabling them to have a good education. In a chapter entitled, 'The Ideology of Sacrifice' they provide a illustration of how the discourse of sacrifice enables these men to invest their labour with dignity and in this way enable them to cope with the lack of dignity and esteem with which they are held by the company. The workers at ChemCo are described in the following way:

They suffer in order to get the money: to buy things. They talk of getting a nice house of their own, for the kids, and many of them have achieved this. Of taking the wife and kids away for trips in the car. Of providing a good life for their families. A good life that is based upon their sacrifice. When you're packing bags, self-sacrifice and a determination to see things through become central to your world; just as they do for wives and their sacrifice in the home. She sacrifices herself for her husband and her children just as he sacrifices himself for them. . . . His exploitation in the factory justifies her oppression in the home: and notions of masculinity and motherhood reinforce their mutual dependence. It is only through sacrifice that a wasted life has value. (1977, p194)



This shows an awareness of the sacrifices of the women who live with these men. Such an awareness is not always evident in later studies, despite the fact that the authors endorse feminism. David Collinson's (1992) *Managing the Shopfloor: subjectivity, masculinity and workplace culture* is centrally concerned with a study of masculinity and workplace culture. His analysis of his interview material illustrates the problem of a narrow focus on masculinity for the theorising of gender relations.

The book is divided into a series of chapters which examine the self management of men in relation to capitalist work practices in a northern factory. The central focus is the way men manage to retain a sense of manhood and masculinity which has been subordinated and oppressed by capitalism. These issues are explored through the themes of resistance, compliance, collusion and incorporation. A number of men throughout the book refer to the sacrifices and responsibilities involved with family life. One worker is quoted as saying:

So now I try to be interested in the lad's schoolwork. I really push the youngsters. I could have made a bit more of myself than I have by being here. At the grammar school I had the chance. I didn't go any further because of myself and not being something better. (1992, p189)

Collinson discusses this worker in terms of his 'heroic sacrifice', which he says, is also 'tinged with

resentment and a sense of constraint' . Yet another worker Frank makes a similar point and is explained in the following terms:

Securing the respect of his children is Frank's primary motive. Sacrifice itself is not enough, he must also achieve promotion and together these actions must be perceived, recognised and valued by his family. Yet in searching to secure the respect of his family, Frank suffers numerous costs: detached relations with shopfloor colleagues, a cynical compliant orientation that "works the system" and a recurrent need to manage and deny deep-seated contradictions between various discursive practices. (ibid., p193)

One of the stated aims of this book is that it seeks to avoid the 'gender-blindness' of previous studies of working class men. Unfortunately, another kind of 'gender-blindness' presents itself and is a weakness in the analysis of the 'various working class masculinities' explored in the text. Paying particular attention to Collinson's discussion of 'Alf' is a good way to demonstrate this point. In his comments on the theme of sacrifice with reference to Alf - one of his respondents, he says,

Alf's sacrifice for his children does not end at the factory gates. It also involves baby sitting every weekday evening, whilst his wife works part-time. Precisely because of his sacrifices, Alf seeks to instil into his two children the very desire and ambition that has remained unfulfilled in him. He wants them to be different from him. Alf is determined to ensure that his sacrifice is not in vain. (1992, p185)

The emphasis is on Alf's failure to satisfy his ambitions and the compromise in regard to his role as the main breadwinner. The significance and importance placed on this man's self-denial and the lack of any comment on the role of his 'wife' is problematic for a feminist reading of this text. The woman is invisible and removed in this analysis. This neglect of any mindfulness of women's role is very salient. On reading the passage I immediately thought about 'Alf's partner' and the 'sacrifice' this woman made as she took responsibility for running the household, caring for two children during the day, doing a part-time job every weekday evening. I found it difficult to accept Alf's 'sacrifice' as purely a privation on his part.

Collinson states that "central to the examination of human behaviour in organisations" (ibid., p233) in a host of issues encapsulating culture, history, power, social practices and subjectivity. However despite his sensitivity to the different discourses which construct the identities and subjectivities of the masculinities practised by the men he interviewed, his theoretical analysis is limited because of his partial analysis of gender relations. Of the limited number of references to women in his text, the majority mention women only in relation to male sexuality. For example he states:

Within the all-male environment of the Components Division, masculine sexual prowess is a pervasive topic. Mediated through bravado and joking relations, a



stereotypical image of self, which is assertive, independent, powerful and sexually insatiable is constructed, protected and embellished. By contrast, women are dismissed as passive, dependent and only interested in catching a man. These images contribute to the unity between men on the shopfloor and constitute a powerful pressure, to which shopfloor workers are expected to conform. (1992, p114)

Though he mentions the "precarious and fragile" nature of the unity constructed through this discourse of male sexuality, he does not attempt to analyse the contradictions or confusions this discourse may engender in relation to their 'lived experiences' and relationships with women and to the process of gender segregation at work. The sexuality emphasised throughout the study is heterosexuality. The notion that the men he interviewed may be referring to a "hegemonic masculinities discourse on sexuality" in order to frame their representations of gender relations is not considered, despite the fact that he make reference to the contradictory aspects of the discourse of sexuality which dominated the shopfloor discussion and practices in relation to sexuality.

Though the theoretical framework in Collinson's study is a very useful one for understanding how a number of discourses shape the "meanings; interpretations; relationships; culture; history; hierarchy; power; practices and subjectivity" (1992, p233) of masculinity

on the shopfloor, it remains however a study of men, not gender, and thus not only neglects to consider the extent to which discourses of femininity impact on hegemonic masculinity but also only provides a partial interpretation of men's work and masculinity, as it is not possible to understand these relationships if women and hegemonic femininity are not included as part of the analysis. As Sandra Harding has argued, it is useless to analyse,

masculinity and femininity (as) simply complementary poles of thought . . . (as) two symmetrical halves of the fruit of the tree of knowledge. Both are partial, distorted, and damaged renderings of the range of male and female potential (1991, p13).

The neglect and exclusion of women is quite common in studies of masculinities. However if Harding is correct that masculinity/masculinities can only be understood in relation to femininity, women have to be part of the explanation and investigation of subjectivity, masculinities and workplace culture and also in order to understand the process of segregation at work.

#### THE IMPORTANCE OF SEGREGATION FOR MASCUINITY

The notion that sex segregation work roles is critical to men and to masculinity is a theme which continually appears in Cynthia Cockburn's work, for example, in her study of *Brothers: male dominance and*

technological change (1983), discussing the behaviour of men in relation to women, work and technical knowledge she writes:

**If women can't do certain work because they are weak, unintelligent or temperamentally unsuited, the resulting economic advantage for men needs little emphasis. There are political advantages as well, however. A man, being relatively competent, becomes relatively powerful. Much of men's self-respect depends on the idea of being able to do work that men alone are fit to do. (1983, p179) (my emphasis)**

Given that the male computer programmers I interviewed were working alongside women who were doing the same job, I was interested to discover the tensions or problems this caused them in relation to their ideas on gender and masculinity. In what ways, if any, were their conceptualisations of gender relations and masculinity affected by the fact that they were doing similar jobs to women? Did the fact that they worked alongside women doing the same job reshape their views of masculinity and/or femininity? What image of masculinity did they use in order to make sense of their work situation? To what extent if any did their work situation create a 'crisis' of masculinity for these men<sup>11</sup>? I was also interested to discover the difference it made to their views on women's and men's roles in the home. To what extent did they hold non-stereotypical or

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<sup>11</sup> The theme of a crisis of masculinity is a strong element of the growth of the literature on men and masculinity (see Brittan 1989, p181-193) for an elaboration of the notion of crisis.



pro-feminist views about sharing household and childcare responsibilities? These questions were prompted by, on the one hand my theoretical problems with the conceptualisation of men and masculinity which proceeds from the concept of patriarchy and on the other hand by the writings by men on masculinity.

My interpretation of the interview material is that men's notion of masculinity was not affected by the presence of women in their occupation. With a few exceptions, the men appeared to be very sincerely complimentary about women's ability as programmers and gave no hint that they felt threatened by their presence. The reason for this is that they tend not to consider their women colleagues in their discussions of work<sup>12</sup>. Rather they are concerned with 'getting-on', or 'getting-up', about 'getting-control' and 'getting-power'. Part of the explanation for this lies in the organisational discourses which interacted with hegemonic masculinity and hegemonic femininity and constitute male and female workers in different ways. One of the consequences of this is that men focused on male work relations rather than on work relations with women. They do not see women as competitors for their ambitions in the workplace. However some of the men interviewed did resent women's presence at the workplace. These men tended to be older

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<sup>12</sup> This is discussed further in chapter eight, "" pages 295-297.

and to view women as inferior workers whose presence diminished the status of the occupation.

There is no evidence from this series of interviews of the presence of the diversity of masculinities, reported in the 'new men's studies' - with the possible exception of age differences. There is also not much evidence that these men were experiencing a 'crisis' of masculinity and that they needed to do much negotiating, or resisting the discourse of hegemonic masculinity. What remains an issue is the usefulness of the concept of masculinities for the study of gendering at work. This concentration on differences between men has a tendency to divert attention away from an interpretation of the how gender segregation still continues to be such a notable feature of organisations.

## CONCLUSION

This chapter has raised a whole series of issues which are significant for any consideration of the relationship between the discourses of masculinity/masculinities and the process of gender segregation at work. It also raises the problem of women interviewing men about feminist issues concerning gender. All the men I interviewed were very embarrassed by my attempts to discuss masculinity. They obviously found very strange and novel the notion that masculinity was in some kind of flux or the idea that one could discuss masculinities rather than masculinity. Rather than the

plurality of masculinities which is discussed at length in the books on men and masculinity, I found many similarities and correspondences in the way these men viewed their relationships to the sexual division of labour in the home and paid work. The language used to express their attitude to their occupation is similar to the terms which are used to denote hegemonic masculinity. They frequently referred to power and control and the competitive nature of their work. They only used these terms in relation to working with other men, so very rarely were women used as a reference point for their comments on ambitions or rivalry at work. One of the most striking similarities was the fact that they all carried with them in their head a very clear account of the structure and the hierarchy of their workplace. They could say without any hesitation who occupied what position; how many people were above them in the hierarchy; what they had to do if they wanted promotion and who they had to replace. The majority of the women I interviewed did not have this type of knowledge of their organisation. The men all openly expressed a pride in their work, especially in the skill and technical aspects of the job. Both of these notions enabled them to experience feelings of superiority, power and control in relation to other occupations. It became evident after a number of interviews that these men were very happy and comfortable responding to my questions in an abstract and



impersonal way: that is they coded their responses in terms of -'men in general'. It is this type of response which can account for the similarities in the discussions of their attitudes to work. It was only when I began to ask questions coded in a specific 'personal' style that I began to note some differences and contradictions in their relationship to their job. Whilst the centrality of work to their subject positions as men was common there were some differences between them concerning their interests and involvement with work and their views on women working. These differences were connected to attitudes towards their female colleagues; family responsibilities, especially childcare and their views on whether their work was constituted around notions of sacrifice or notions of intellectual stimulation and challenge.

Different facets of hegemonic masculinity will be foreground in different contexts, different aspects of which will be present depending on the life experiences of individual men. The manner in which the structure of organisations and organisational procedures shape the social construction of masculinity is that these practices need to form part of an explanation of gender relations. In the next chapter I seek to examine this discourse and the role of organisations in the process of gendering with reference to the different workplaces I visited during the course of my research.

## Chapter Eight

### ORGANISATIONAL DISCOURSES

In the previous chapter on masculinity I discussed the contradictions confronting men in relation to the discourse of hegemonic masculinity, and the ways in which elements of this discourse, particularly those related to work, restrict their participation in the division of labour in the household. I illustrated how notions of 'sacrifice' and 'responsibility' in relation to the family, are powerful elements of masculine subjectivity, and demonstrated the way this frames their relationship to domestic labour. It is suggested from this account that a number of competing discourses: those of hegemonic masculinity and femininity, facilitate the reproduction of an unequal division of labour in the home and goes some way to explaining the process of segregation which I found amongst the female and male computer programmers in my sample. The discourse of hegemonic masculinity and how men used elements of it to 'become' men, is however, only part of an explanation for the process of gender segregation in this occupation. Another key ingredient is the organisational discourse which interacts with the discourse of hegemonic masculinity and frames the culture of the computer industry. Different organisations and occupations will be shaped by aspects of organisational cultures which have specific traditions and histories. This chapter examines the specificity of computer

programming and considers the contribution of organisational discourses to the process of segregation in this occupation. As Savage & Witz state: "Organizational processes are central to the understanding of gender relations, and concomitantly, that organisations are gendered" (1992, p3). With reference to the interviews I conducted with computer programmers, I explore the extent to which organisational discourses shape the discursive field of work and impact on the gendering of the culture of the computing industry.

The discursive fields of gender, work, and organisations, are constantly shifting through the processes of resistance, compliance and negotiation. The rate of change, and thus the fixity or fluidity of particular discourses, will be shaped by differing economic, social and political situations. The way individual women and men use aspects of these discourses to give meaning to their experiences (their subjectivity), and to their identity as gendered individuals, is therefore often precarious, contradictory and unstable. In order to provide an explanation for the process of occupational segregation amongst the programmers in my sample, it is necessary to examine the relationship between the organisational culture of computing and the relationship between this discourse and hegemonic femininity. Organisational discourses are



moulded by differing organisational cultures, and some cultures are easier for some women to negotiate than others. The impact of the two distinct types of organisational culture I found in the companies I visited in the course of my research, affected different women in different ways.

The emphasis in this chapter is on the conflict and contradictions experienced by the women I interviewed as they resist and negotiate the organisational culture that structures their occupation. At the same time, I illustrate how some of these women also strive, whilst working as programmers, to reconcile the friction presented by these discourses. I argue that the organisational discourse of the computing industry is inherently contradictory for women because of the ways it clashes with discourses of femininity and domesticity. The organisational discourses which I found in the companies I visited produce contradictions for women for a number of reasons, the most important being the gender bias nature of organisational discourse. Organisations are not gender neutral, they are structured around the notion of a male worker and this is one important aspect of the way this discourse conflicts with elements of the hegemonic discourse on femininity. For to be an 'organisational man' you have to 'forget' that you are a woman. As Gareth Morgan points out:

**It often makes a great deal of difference  
if you're a man or a woman! Many**

organisations are dominated by gender-related values that bias organisational life in favour of one sex over another. Thus . . . organisations often segment opportunity structures and job markets in ways that enable men to achieve positions of prestige and power more easily than women, and often operate in ways that produce gender related biases in the way organisational reality is created and sustained on a day-to-day basis. This is most obvious in situations of open discrimination and various forms of sexual harassment, but often pervades the culture of an organisation in a way that is much less visible. (Morgan 1986, p178)

Organisations are suffused with the discourse of hegemonic masculinity not femininity. In order to understand the gendered nature of this discourse it is useful to refer to the work of Max Weber.

#### THE SOCIOLOGY OF ORGANISATIONS

The sociology of organisations is usually seen as having its foundations in Weber's notion of bureaucracy and rationality. It is Weber's 'ideal type' notion which acts as a template for the beginning of the analysis of modern capitalist organisations. For Weber, capitalism is part of an even broader cultural development: the rationalisation process. The instrument of rationalisation was bureaucracy, which Weber viewed as having expanded and grown because of its technical superiority to any other form of organisation. Capitalism was driven by irresistible forces to create conditions which would allow a maximum of productivity and a maximum degree of efficiency. The advance of

capitalism was thus inevitably tied up with the rise of bureaucratic formal rational organisations at all levels of social interaction. For Weber, rationalisation and bureaucratisation are irreversible and inexorable. Rationality is used by Weber to describe the emergence of modern bureaucracies and his 'ideal type' is used to refer to the way organisations should work in terms of efficiency and authority linked to rules and rational goals. According to Weber this rationalisation is part of the logic of capitalism which replaces traditional and affective ways of organising.

Weber's organisational typology has been the subject of much criticism. A number of studies have pointed to the ways that organisations are shaped by 'informal' rather than 'formal' rationality, (see Gouldner 1954; Blau & Scott 1963). As Savage and Witz (1992) point out, Weber's:

stress on the formal rationality of organizations has been subject to incessant critique and it is now widely accepted that organizations can only be understood by considering their implicit, informal order, as well as their formal procedures (see amongst others Gouldner, 1956; Crozier, 1964; Giddens, 1982; Morgan, 1986).  
(Savage & Witz 1992, p4-5)

The informal system or network of goodwill, friendships, heroes and heroines, likes and dislikes, all operate to keep the 'factory' or the 'office' ticking over. Informal rules and practices, and, of course, discourses



of gender, structure organisations to a far greater extent than formal rules. Pringle (1988) states that:

Theorists of bureaucracy have long recognised that the personal intrudes into the workplace all the time; even that it is necessary to have an informal arrangement alongside the formal structure to motivate people and to make things actually work. (1988, p87)

In the previous chapter I mentioned that Weber's analysis of the development of capitalist organisations and the growth of bureaucracy is based on the separation of the household from the world of business and commerce. In this way the organisation of work under capitalist social relations is premised on the notion of different spheres and a specific set of gendered social relations. Bologh's (1990) study of Weber's sociology argues that his views on bureaucracy and rational action are masculinist and patriarchal. Her analysis provides a useful account of the relationship between hegemonic masculinity and organisational discourse. She argues that Weber's work is:

masculine, because it unself-consciously expresses idea(l)s and values that are associated with masculinity; masculinist, because it self-consciously champions these values and denigrates or ignores others considered feminine; patriarchal, because many of its idea(l)s and values assume and require a social order in which women and women's ways continue to be dominated, repressed and defined by subordination to men and men's ways. (1990, p1)

At the level of theory, then, Bologh demonstrates the gendered character of Weber's organisational analysis. On an empirical level, Clare Burton's (1991) study of equal employment opportunity agendas and the problems of the implementation of these plans also points to the way masculine values and bias pervades most organisations. She says:

Whether because certain constructions of masculinity are built into the very definition of many jobs, or because certain positions, or qualifications for advancement, demand time and activity which assume the existence of domestic support, the present arrangements in work organisations represent the cumulative outcomes of a series of bargains and compromises between various parties among whom women have not played a significant or influential part. (Burton 1991, p3)

Several extracts from the interview material quoted above refer to the pressure to work long hours and suggests that assumptions about women's domestic responsibilities affect recruitment to the computing industry which would indicate that masculine values have permeated computer programming and intersect with organisational culture.

#### **ORGANISATIONAL CULTURE**

Generally, organisational culture refers to the pattern of beliefs and values which are known, understood and presumed to be shared by most people in the organisation. It can be thought of as a form of glue which holds an organisation together. The importance of

a strong organisational culture was 'discovered' over the previous decade. The beginning of interest in this topic can be traced to a study of nearly eighty companies that found that eighteen were "outstanding performers" and were characterised by "strong culture", which meant that they had a clear set of organisational beliefs and values (Deal & Kennedy 1982, p7). In some companies the culture of the organisation is re-enforced with formal ceremonies, displays, rituals, and symbols of achievement and identification. For example, a badge or uniform would be worn by the staff, in order to create a corporate image (Deal & Kennedy 1982).

#### **THE ELEMENTS OF ORGANISATIONAL CULTURE**

An organisational culture consists of five major elements: the business environment and associated values; the heroes and heroines<sup>1</sup>; how success is defined; the rites and rituals, and the cultural network (see Deal & Kennedy 1982, p13-15). Despite the lack of a gender analysis in this literature, it is important to note that each of the components constituting organisational culture is shaped in the main by a masculine values. In discussing each of these factors in turn, I will

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<sup>1</sup> There are no references to heroines in the book, only heroes. There is one reference to culture and women which states that women create their own subculture. They write: 'Gender is important - a man's cultural outlook is different from a woman's. Socio-economic and educational backgrounds also become the basis for subcultures. Each has its own relevant environment and world view; special heroes, rituals, ceremonies, language, and symbols communicate particular values'. (1982, p151)



endeavour to illustrate the ways in which these elements are gendered.

The biggest influence on the culture of an organisation is the business environment in which it operates, and this is determined by the degree of risk associated with the organisation's activities, and the speed at which the organisation, and its employees, gets feedback, support and feels empowered. The profit motive is the driving force in capitalist organisations and efficiency the criteria of success in non-profit making companies. The nature of the business will also produce differences in relation to the structure and practices of people within different occupations. A manufacturing company, a retail or insurance company, a public sector organisation like a local authority or the National Health service, will have different things driving them. Each will experience different levels of competition, and some are driven by production, or marketing, and some by social need.

In the European Union, organisations are now required by law not to discriminate against women in terms of pay and other conditions of employment. As Cockburn (1991) indicates, it would be premature to state that 'equality' could be constructed as a driving force of capitalist organisations. Yet the legislation means that large organisations have to produce some kind of programme, which could mean that groups other than white,

middle-class men, have some mechanism to challenge the overt examples of discrimination. This legislation also means there is an increased awareness from organisations of the problems facing women at work. A small sample - over a hundred out of possible thousands - have initiated equal opportunities policies (Cockburn 1991).

A number of studies (Coyle & Skinner 1988; Burton 1991; Cockburn 1991), looked at the effect of equal opportunity initiatives and found little change. They argue that a variety of factors can help to explain this lack of change. The highly political nature of equal opportunities brings to the surface, at an organisational level, the discrimination suffered by women, and has the effect of making men and some women uneasy. The high level of sustained commitment and investment, both in time and resources which is needed, frightens the management structure. There is also no immediate pay off for management, so there is little incentive for them to go beyond the publication of a document which is 'toothless'.

The situation in the United States is a bit different in respect of federal and state legislation which operates contract compliance ensuring the adoption of an affirmative action programme. A report commissioned by a governmental committee on women's employment (Reskin & Hartmann 1985), outlined the obstructions which existed in organisations which

hindered opportunities for women at work. Some barriers that exclude women from certain male occupations are embedded in the formal structure of an organisation, and this is referred to in chapter six. Evidence from nearly all studies on women and work suggest that the lack of adequate affordable and convenient child care prevents some women from participating in the labour force and limits others to jobs that they believe will accommodate their child care responsibilities. The personnel practices, job descriptions, mobility ladders and the organisation of tasks are the main problems highlighted in the Reskin & Hartmann (1985) study<sup>1</sup>. These practices may have developed simply as the by product of administrative rules and procedures that were established for other reasons, such as seniority systems. However, once they are incorporated into an organisational structure they persist regardless of the lack of any discriminatory intent. Barriers to part-time working and job sharing are other obvious examples. There are some examples of these kinds of practices in my research material, and have been referred to in earlier chapters. The problem however is the interpretation of these practices.

The Reskin & Hartmann (1985) study explains the failure of equal opportunity legislation to fundamentally

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<sup>1</sup> See chapter five and six for evidence of this in the companies I visited.



shift women's position in the paid labour force by arguing that this legislation is shaped by a liberal perspective which looks to changing the structural arrangements which disadvantage women. Though equal opportunity policies can have some influence in these areas, they usually come up against the cultural beliefs about gender and work which are structured by the discourses of hegemonic femininity, hegemonic masculinity and organisational discourses, all of which produces contradictions and problems for changing women's position in paid work. Cultural beliefs refer to assumptions about the nature and role of men and women, to issues and attitudes relating to perceptions of women's 'proper sphere'. That is ideas concerning women's role in the home, issues relating to male and female relationships at work and those related to innate differences between the sexes.

The idea that women and men bring different traits to work has continued to influence management to favour one or the other sex for particular occupations (see Burton 1991). Hiring decisions in prestigious professional and managerial occupations often involve subjective appraisals of whether an applicant will 'fit-in'. One senior manager at *Business Systems Department* said about the women computer programmers he supervised,

**I also think they're better suited than men  
for some of the jobs**

**A.F. What jobs?**

**Some of the systems work, you know**

A.F. Why do you think women are better?  
I think there're more careful with details.  
For example, with Heather, I think I was  
using her to go and tackle some employment  
people because she could get away with it a  
lot more than I could. She could go and  
talk to these people and persuade them to  
do things and they wouldn't argue the toss  
or play for time  
[Extract from transcripts]

Another executive in the same firm stated:

I mean, alright, it was an advantage that  
she was a woman I think. She was a woman  
who wanted to work with men as well so she  
was very good at dealing with men and she  
would have been a tomboy when she was an  
apprentice I think, . . . She was  
definitely able to take advantage that she  
was a woman.  
[Extract from transcripts]

The stereotype of what constitutes good management  
material tends to be biased towards men. Terms such as  
"dynamic", "competitive", "ambitious", "strong",  
"ruthless", were used by some of the men I interviewed to  
describe the characteristics of a good manager. In the  
interviews material a number of men referred to the few  
women who were in managerial positions in two of the  
companies in my sample as "pushy".

I was going to say men are better in a  
fight than women but that's not always true  
either, you know, in meetings and arguments  
but I think it's fairly rare for women to  
come to the fore in that sort of  
environment. I think Maris is one and I  
think Karen is another one, you know, she's  
very pushy but these women are the  
exception  
[Extract from transcripts]

These comments support the research by Kanter (1977), in which it emerged that men tended to see only other men (rather than women) in positions of power and authority. As Gareth Morgan states in his book *Images of Organisations*:

The links between the male stereotype and the values that dominate many ideas about the nature of organisations are striking. Organisations are often encouraged to be rational, analytic, strategic, decision-oriented, tough and aggressive, and so are men. This has important implications for women who wish to operate in this kind of world, for insofar as they attempt to foster these values, they are often seen as breaking the traditional female stereotype in a way that opens them to criticism, e.g. for being 'overly assertive' and trying to play a male role. (1986, p178)

Some women find superficial acceptance in predominantly male occupations but are excluded in subtle ways that impair their ability to do their jobs. Often this exclusion is not deliberate. Men may be unaware or indifferent to the process, and women reluctant to speak up. But are men simply unaware of the ways in which they hinder women, or are men actively resisting women's equality? The interview material is contradictory on these issues. There was some evidence that 'actual' men did resent the presence of women in the organisation. One woman told me:

There are certain people in the area who,... there's a few people who've worked in the army and they certainly do to some extent have this type of attitude toward women that no matter what the title is or what the job, they're just inferior to men, and I've found that most



of these types as you go back into what they've done in the past a lot of them have been involved in the navy or army or something like that so whether that's got something to do with it I don't know.

[Extract from transcripts]

A more common technique for exclusion was one of not paying attention or ignoring women's requests as the following extracts demonstrates,

You don't get listened to. I mean they just think I'm an old women. You say anything to them and they go "Oh, Yes", that is their attitude. I mean on one day a week I work across the other side and for two years now I've asked if I can have a desk lamp. I'm still waiting. It's in hand, they say, every time I mention it but yet two young lads have come and are working in there. They were there two weeks and they both had desk lamps. So if one person can get it why can't others and it's always the women that can't have it. You do feel you're discriminated against being a women.

[Extract from transcripts]

One of the young men asked if he could see the boss, and he was seen within an hour. If I ask to see him I might wait a fortnight, three weeks before I see him. Oy, yes, well, yes, "we'll put you in". "I'm a bit busy now". "I'm a bit busy". That's what you get

[Extract from transcripts]

I think as an industry generally *Business Systems* are still reaping the benefits of the male dominated culture.

A.F. How does this affect you?

It doesn't bother me. It doesn't worry me at all as long as I'm treated as an equal and not talked down to and you do get people talking down to you. There was a recent instance where I could have cheerfully ripped somebody's throat out given the opportunity. I was so taken

aback I had never been spoken to so contemptuously in my life to like that and I was surprised enough not to retaliate which isn't like me. I would normally say something. It's not my place to tell the guy off for what he said to me because he's fairly high up but if I'd thought about it at the time I would have turned round and told him that he shouldn't be speaking to me in that manner. But you do get some male chauvinists, you do get some people who like to pretend they're male chauvinists because they like to get a rise out of women. We've got one in this section now who just likes to have a bit of banter with women  
[Extract from transcripts]

More typically, both women and men in the sample referred to, what was described as 'common sense' notions about the attitudes to work of women and men in general. The following extract from one of the men illustrates this type of common sense response:

Perhaps men see the job more as a career where perhaps the women see it as a job. So perhaps to a certain extent the men get a little more worried about the job, how it's going, you know, where they're going, sort of on a more long term view whereas perhaps the woman can take things more in her stride because she sees it "Oh, it's just a job and there are other things, sort of more important" or I would say of equal importance  
[Extract from transcripts]

Differences in achievements between women and men were commonly assumed to be about individual differences. There was no mention of structural or cultural barriers to promotion or advancement. As one woman said,

I mean, it's not the company's fault there aren't more women managers in one respect

because really I'm one apprentice out of about 99 who's a girl. So I think half the time women are their own worst enemies. Because women haven't projected themselves around here, then why should the managers look and see what's going on?

[Extract from transcripts]

Both discursive and material elements can be discerned in this outline of organisations structures. Certain practices have concrete effects, for example, ruling out women with children for promotions or management. Though these practices are important the prime concern in the thesis is the meaning of a 'good worker' and the extent to which this fits in with conceptualisations of masculinity and is in conflict with conceptualisations of femininity. The emphasis then is on the discourses of gender and how these shape gender segregation. This approach is similar to Cockburn's study of gender and equality in organisations which is discussed below as it provides some further examples of the contradictions in organisational discourses for women.

#### IN THE WAY OF WOMEN?

Cockburn's (1991) study analyses the impact of positive actions programmes in four different types of organisations and demonstrates the conflicts between organisational culture, hegemonic masculinity and discourses of femininity. Her research provides many examples of the difficulties and limitations of these policies for women. The study provides some useful examples of the contradictions for both women and



management with regard to women's paid work. These contradictions however also suggest the possibilities for change. So, for example, in her discussion of policies which enabled women to combine paid work with domestic responsibilities, Cockburn observes:

Here we saw how some men at the top, either because they were generally supportive of equality for women or because they were increasingly aware of the imperative of competing for women's labour power in a tightening labour market, were willing to extend paid and unpaid maternity leave, to provide child care and to make women's terms of employment more flexible. Such 'mothers' privileges' are contradictory for managers. They secure women's services but involve expense and new administrative difficulties. They are also, however, a mixed blessing for women. They enable women to sustain careers, of a kind, but confirm them as the domestic sex. The longer agenda of some women therefore is to see men make use of these benefits to the same extent as women, to see men sacrifice some of their time and their career priorities to share child care and other domestic tasks with women. Very few men follow women thus far. They resist simply by refusing to change their practices. Personnel managers do nothing to encourage men to relate to work and home in the manner of women. (Cockburn 1991, p217)

Cockburn's study demonstrates the way these policies conflict with the 'naturalised' discourse of hegemonic femininity whereby women are still expected to have domestic responsibilities. The ubiquitous nature of this cultural practice is supported by another analysis of equal employment opportunity programmes. Burton (1991) writes:

Within work organisations, ways of perceiving and interpreting events are structured around these associations of women with the domestic sphere and men with the sphere of public activity. Organisational cultures reflect women's marginal place within them; they reflect men's interest and the general situation of men in our society rather than the range of preferences and values held by women (1991, p32)

The argument running through these studies is that men resist women's presence and advancement in the workplace. The emphasis then is on the role of men rather than the contradictory role of discourses which is the perspective taken in this study. The following section attempts to give some examples of this.

It could be deduced from these analyses that the more evidence there is of gender bias in an organisation, for example, the overwhelming presence of men in positions of power and authority the more likely it would be to find a strict gender division of labour and a rigid occupational segregation. However, my research would appear to indicate that the process of segregation is more complex than this suggests. The complexity is due to the way individual women and men negotiate the gendered organisational culture which organised the occupational practices of computer programming. Despite this women exercise a degree of agency and choice in relation to the positions they occupy in the industry as demonstrated by the following extracts.

I got so fed up of being sort of left at the bottom of the pile and not being able

to do anything about it that I just decided either I left and went into industry and became like a bookkeeper type end of industry or I changed altogether so as I say I went to see the computer partner who I knew wanted some people to work for him and he said "Oh, what a fantastic idea I was just about to try to recruit some people to start a computer department up" and myself and James Marwick set up the computer department here. In effect it's just grown from there really. I walked into his office at the right time really. It was pure chance.

[Extract from transcripts]

I phoned and asked for an interview and he said "why did I want to go into computing" and I instinctively knew I could do it, partly the fact that this friend had taken me through a few basics and he was prepared to stick his neck out for me, and Andy said "Well, we'd like to advertise the post" and you know when you get detached and you stand behind yourself and I heard myself saying "Look, Andy", I said, "Even if you advertise you're not going to get anybody better". So I didn't know either I'd done it or not because he kept insisting I was married with kids and kids interfere and I kept saying, "Look I've taught for eleven years, all the time, I've had kids, if you want my track record I'll get letters from Heads, whatever you want, they do not interfere". So anyway he rang me up on the Monday morning and said, "Yes Ok you can have it", which put a smile on my face for the first time for eleven years as you can imagine,

[Extract from transcripts]

In order to discuss in more detail the conditions from which women exercise agency, I intend to examine the cultural discourses which structure the computing companies I visited with reference to the different elements which constitute organisational culture.



## **(1) THE BUSINESS ENVIRONMENT OF COMPUTER PROGRAMMING**

As I described in chapter five, my research was carried out in a number of computer establishments, of which there were two distinct types. The first is the software house and the second the 'in-house' installation. Small software houses are a very common feature of the computing industry. In this type of organisation, the staff base tends to be very small, with men outnumbering women on a ratio of three to one. In the companies I visited all the secretarial and reception staff, with the exception of car-park attendants and porters, were women. There is a constant fluctuation in staff numbers, due in part to the rapid staff turnover which is a characteristic feature of small software houses, and to the number of contracts the company has 'on-going' at any one time. Computer programming staff are not moving out of the industry, they are moving around. Many of the people I interviewed had worked in each of the software houses I visited. Of the four software houses where I conducted my interviews, a number of the interviewees had worked for all three companies. This applied to both women and men in my sample. The business environment in which these companies operate is highly competitive, and few survive for any length of time. As mentioned previously one of the companies, Radola, is considered, in terms of computer companies, relatively old and established, as it had been in

existence for twelve years when I conducted my research. It is one of the few highly rated and very successful software house in Britain.

#### THE ORGANISATIONAL CULTURES OF SOFTWARE PRODUCTION

What struck me very forcibly about the companies I observed during my empirical research was the different cultures that shaped the workplaces. In contrast to 'in-house' computing departments, software production companies are highly pressured. There was always a great deal of activity, noise, bustle, whilst I was conducting the interviews. Many of the interviews had to be stopped midway as the person I was interviewing needed to stop to check some problem; or the phone would ring with an urgent request for advice and consultation. On some occasions, I had to walk and talk with the person I was interviewing as this was the only way to complete the conversation. An energy and an air of excitement was generated by these constant interruptions and the demands for immediate action and decisions, all of which created a highly pressurised and stimulating environment.

The atmosphere of the 'in-house' installations was extremely leisurely by comparison. Here, the interviews were very rarely interrupted. Coffee was always provided. The atmosphere was extremely relaxed, comfortable and easy-going. The worker's hours were very regularised in comparison with the hours worked in software houses, and this environment helps to account

for the greater proportion of women computer programmers in my sample, who worked in 'in-house' installations rather than in software houses. However all programmers, at different times, will be required to work irregular hours, though this is more common in small software companies than in large organisations with their own computer departments.

The differences between the two types of computer organisations can be explained by the different business environments of software computer companies and 'in-house' installations, and was often commented on by the women I interviewed.

People who come from a different working environment, from a different type of company, particularly somebody who has come from an 'in-house' computer department to a software house, they'd probably find it quite a transition.

A. F. Why?

They have to be more dynamic, there's high pressure where it would be unlikely, although it would not be impossible, certainly, for there to be high pressure in an 'in-house' computer department. Here [Radola], the timescales are very tight, there's economic pressure which there isn't usually in 'in-house' installations. The way we work is definitely more dynamic, and people are expected to work at a very high level all of the time to justify the salary. So, it's a different emphasis and some people are suited to either one way of working or the other and they don't necessarily make the transition easily, although some do obviously. I mean, I myself came and made that transition and I found it an absolute relief to come into an environment like this but some people don't like it and it's purely a matter of personality and personal choice.

A. F. So the pressure on every job...?



There is a pressure to perform for every project because we only have to get one project wrong and we start losing credibility and that could be quite expensive, particularly if we lose credibility in front of a constancy company, so it can have far-reaching effects.

[Extract from transcripts]

It varies again tremendously. I mean one day you can be sort of floating along and everything's wonderful and you've got bags of time and then the next day, I mean I've just had this with a client in Fleetwood whose computer just started to collapse in a heap and then I mean, they rely on you so heavily that I've been on the phone with him for about three days and you really feel like "Oh God, I can't stand any more of this" and I really was like that yesterday and it really does vary tremendously. I mean that's one of the things, I quite like working under pressure but not all the time, you know.

[Extract from transcripts]

It can be a bit stressful. We get put under pressure from the users. We have deadlines. If you don't hit them we get put under pressure and the longer we are out the more important people start getting on to us so it can be quite stressful. Computers are frustrating things if you're trying to do something and the computer's not coming out with the answer and you can't understand why. It can be stressful in those situations

[Extract from transcripts]

The pressured environment of computer hardware and software production is very clearly described in Kidder's book *The Soul of the New Machine* (1981). It's interesting that this text is housed in the 'science' section of my institution's library, and the representation of computer workers owes much to the

mystery and romantic of science. West, the project leader, is held up as a legendary figure, an inventor, someone who "didn't sleep for four nights" (ibid., p7), tough, aggressive determined, representing values which accentuate the connection between the male stereotype, science and computing. Some of the interviews point to the ways by which this culture of science shapes computer programming. One woman stated,

I thought about it but I was told at the time that you needed to be good at maths and science and I wasn't so I just put it out of my mind. It was only when I came back to here and I got to know people who worked in programming and they said "Oh you just need to be logical. Have a go". So at first it just never entered my head I just didn't think I was capable  
[Extract from transcripts]

And one of the men said,

I think a lot of women think it's an area that is possibly boring and not an area where you would normally see women working. I think women always tend to see themselves as nurses, secretaries, they don't see themselves doing a job that is maybe a bit different, as they think computing is boring, while men obviously are more prone to go towards things like engineering and car mechanics and I think computing comes into that sort of categories and interest, and I think so far has probable been a man's world  
[Extract from transcripts]

The view that computing is a 'man's world' is a strong element of the culture of programming. So, for example, the 'in-house' establishments, though not working in the pressurised environment of software houses, the majority

of men still use terms such as "stimulating", "challenging", "exciting" to describe programming - comments which are similar in tone to the description found in Kidder's book, as demonstrated by the following extracts.

It comes down to this what we were talking about before. That the challenge, maybe it should be satisfaction, it's the satisfaction you feel when you, you know, you have been responsible for a project right from the initial stage, the birth of the project if you like and seeing it right through to, you know, writing it, installing it, teaching other people to use it and seeing it in use and you know it's yours, you're responsible for it, I think that's quite rewarding,. Whether that's, probably comes under satisfaction more than rewarding, I think it's more or less the same to me though.

[Extract from transcripts]

If you're programming, you're making something that's very visible in the works. I enjoy doing one thing, concentrating on it, and making it work. It's an addictive process in some ways whereas I enjoy dealing with people and trying to shape people and set up technical projects and technical decisions which are strategies but it's a different form of enjoyment, you don't get the same challenge, it's not as easy to see that you've achieved anything

[Extract from transcripts]

The notion that women would not 'fit' because they rarely had this competitive edge or ambition is very widely voiced by the interviewees.

Men are more ambitious. They react in a different way to the power struggle type of set-up, which isn't a better way necessarily. The females that we have here are more orientated to doing a job and probably enjoying it than they are to



getting up the next rung in the ladder. The females that we have are not as willing to engage in the politics and the organisational hassle outside our environment, part of that might be that because there aren't many women outside our environment as there is in the production and technical areas. The majority of females outside business systems are secretaries  
[Extract from transcripts]

The men and women spoke about their job differently in that many of the men referred to the challenge of the job and this was reflected in their approach to a new piece of work. Many of the women were tentative and unsure with a new programme but expressed similar satisfaction at confronting the challenge. These difference are expressed in the following extracts, and were used by both women and men to validate their essentialist view of sexual differences. One woman said,

As I say when you're given this sort of programme spec. you sit down and look at it and think "Oh I'm never going to be able to do that". Then, I say you get your brain working on it and maybe after a week, two weeks a month whatever, and you have finally sorted it out and you've got your programme done or your piece of work done and yes, it's then you're feeling like you've achieved something that you thought, you maybe thought at the outset that "I'm never going to be able to do it" and it does wonders, you know.  
[Extract from transcripts]

And a man comments

Its so exciting starting a new programme especially if there is a large amount of work its got to do, that is the amount of areas on the disc, its got to access

different files and data bases. I mean the whole programme, you can have a programme that you have to split to five or six pieces because it just won't run the system. You have to chop it and run piece after piece after piece. I mean with something like that, that's pretty well complex and it's not just the complexity of it, everything's got to go right. If it goes wrong you've had it mate. There's no going back to it.

I find that exciting.

[Extract from transcripts]

## THE ORGANISATION OF COMPUTER PROGRAMMING

Despite some differences between the companies, the organisation of the work of a computer programmer follows a very similar model in both types of organisations. The following description illustrates the process. The story is told by (Jean D.), whose position in the industry is unusual for two reasons. Her role was that of an Applications Development Manager for a nation-wide software company, the head office of which is in Hull. She is one of only women in my sample who were in charge of men (there were no women in her team). Moreover, at the time of our interview, she was only twenty-six years of age. She organised a staff base which consisted of between twelve to fifteen programmers. This group was then divided into four project teams which she oversees, and different teams would work on a piece of software. Some project managers will maintain a tight control over the system, whereas others will be more flexible. As I explained in chapter five, it is very rare for one person

to write a programme on their own, but the amount of control an individual programmer has is very dependent on the team leader. The programme can reflect just one person's ideas, or be a collaborative piece of work. The style of the project leader will have implications for the amount of autonomy or de-skilling involved with production. So for example the Kidder study refers to the collaborative strategy adopted by the project leader which meant that:

The work was divided, but it was not cut into ribbons. Everyone got responsibility for some important part of the machine, many got to choose their piece, and each portion requires more than routine labour. (1981, p274)<sup>3</sup>

This division of labour is very common throughout the software industry (see Friedman, 1989). However, the emphasis in the literature on this model neglects the other aspects of programming; the operation of software maintenance and support. Once a project is complete, (or installed in the case of 'in-house' computing), the software company is expected to provide support and assistance to the users of the programming package. So, though in both types of installations, programming is organised on a discrete project basis, software maintenance continues alongside and does not feature in the literature of the industry. As I explained in

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<sup>3</sup> Paul Thompson & Eddie Bannon's book (1985) *Working the System*; the shop floor and new technology tells a different story about engineers working with telecommunications technology at Plessey plants on Merseyside.



chapter five, men were found in the high-status, bespoke area of programming: the project work which is outlined above - whereas there was a tendency for some women computer programmers to be relegated to the areas of support and maintenance.

**Generally speaking I think the women tend to get the support jobs and the men tend to get the technical jobs**  
**[Extract from transcripts]**

As suggested by this and the previous extracts relating to support jobs, cultural beliefs about women intertwine with the culture of computing making it difficult for women to be recognised as project leaders. One woman explained this sexual division of labour in the following way:

**The distinction was that the girls would do the more boring jobs, more carefully, and more industriously, so they'd put the lads on more interesting work and I recognised that it would never change.**  
**[Extract from transcripts]**

She made this comment when she was describing her early experiences in computer programming. Susan is one of the most experienced and knowledgeable computer programmers in my sample. Her programming work is concerned with flight test analysis. She started her career in the Ministry of Defence working on aircraft design. She later moved to GCHQ. She started programming in machine code, and her experiences duplicate those of the early women programmers who built

the ENIAC machine in the United States, (see Kraft, 1979; Strober and Arnold, 1987; Henwood, 1993).

I started off in machine code, and they were mostly women, hardly any men, mostly women working as programmers there and a lot of them were Foreign Office employees and we weren't. We were Ministry of Defence and we were quite distinctly the lower grade . . .

[Extract from transcripts]

Despite her long experience in programming, and the level of complexity of the programmes she worked on, Susan has never been asked to lead a project in any of the organisations she worked. Project teams, and of course, leaders of such projects, acquire prestige and power from working on the development of new software. The work, though very stressful, is intellectually stimulating and exciting, and confers status on the programmers concerned, and as a recent study states, the work can "lead to the worst excesses of self-destructive macho behaviour" (Murray 1993, p76). Fergus Murray's article on the relationship between masculinity and the production of software supports my view of the atmosphere and pressures of computer programming; an environment which accords with men and masculinity rather than women and femininity. He states:

. . . project work appears to take on a life of its own: it is bigger than any of the individuals making it happen. You can either embrace it or take the difficult path of the conscientious objector, but in order to instil the project with glory and with a 'this thing is greater than us but we have to do it' dimension, frequent

recourse is made to war imagery. (Murray 1993, p74-75)

When I discussed project work with Susan, she said:

I don't really want the hassle and yet I seem to be getting it anyway.  
And women aren't as ambitious [pause] - I'm not ambitious. Women aren't as ambitious. You know, I've not applied for promotion. Promotions have come up where I might have been considered, I don't know, I might not. A.F. When you say you don't want the hassle, what do you mean by that?  
Well, the worry and the sort of emotional drain that worry causes.  
[Extract from transcripts]

The business environment and the organisational model which structures the work of computer programmers create an organisational culture which is stressful, competitive and tough. In his discussion of a problem with a difficult colleague one man explained how he had to be "tough", rather than "weak" and "cowardly",

I could have, because of the state he'd got to, he was starting to swear at me and things like that, I could have gone into procedure and taken that to a disciplinary committee. That's maybe a cowardly way out, so I worried that if I went too far the department would lose him and the job would suffer. I was torn between two things and I think I was probably weak. I should have been much tougher with him in the first place  
[Extract from transcripts]

Not only do organisational discourses make it difficult for men to see women as project leaders they also make it difficult for women to see themselves as team leaders or managers. One woman stated:



Well, I'd do it (project leader) if I had to but I think it probably does frighten me slightly, maybe I can't cope  
[Extract from transcripts]

And another said:

I'm not too sure whether I'd be able to do it. I just don't know. But then I have to be pushed into everything. This is how I get on. They have to push me to do the things that I don't think I can do. I don't have the drive. It's not so much the drive I just don't honestly think at the time that I can do it.  
[Extract from transcripts]

This feeling is reinforced by the view as expressed by some of the women interviewed that,

I think a lot of the men would have problems relating to a woman.  
[Extract from transcripts]

That men had difficulty relating to women in connection with programming was mentioned by a number of women. This is related to the view that women are not as 'serious' about their work. This lead to women having to struggle to be taken seriously an issue which is discussed in the next chapter. The following extract illustrates that though some men are aware of this issue, they are unaware of the sexist practices which uphold them, for example, referring to female colleagues as girls.

Women can get treated as the office girl. Someone may ring up and this girl answers the phone you know. The message is almost "when someone of superior intellect is available could you get him to solve this problem for me" Whereas it will be those girls that will be solving the problem and

they get hit by that a bit I know. Julie's certainly been hit by that, I don't know if she mentioned it.

[Extract from transcripts]

Only two of the women I interviewed were project leaders. When I asked why they thought there were so few women in this position, Jean D, (contradicting her own history) explained that women were more suitable for support work as they did not always have the same interest in a career as a man therefore,

it always crosses your mind that they will get married . . . and you can end up investing a lot of money in somebody and they leave you because their husband has moved jobs or have moved location or they want to start a family and that is a very real problem

[Extract from transcripts]

Later on in the interview, she indicated that she had experienced some unpleasant situations which were related to the fact that she is a woman.

She told me that on one occasion, when she was part of an interview panel, a young guy "was so shaken to be interviewed by a woman that his interview was terrible", [extract from transcripts] and finally he said that he would find it difficult working for her. Jean had responsibility for the recruitment of programmers so her gender stereotypical views are quite significant. Women's contribution to the practices of discrimination and job segregation is not usually considered in the literature on segregation. Yet, in seeking to understand this dimension of gender segregation, it is important to

pay attention to the impact of both the organisational discourse and the discourse of hegemonic masculinity on women's actions. Because these discourses are more powerful in organisations than hegemonic femininity then this produces this type of contradictory practice by women towards women. The way that these discourses can constitute subjectivity in individual women and men have, as Weedon points out, "implications for the process of reproducing or contesting power relations" (1987, p92). There are a number of extracts from the interview material which demonstrate this tendency.

In some respects women don't support other women getting on. Thinking about the secretaries, some of the better ones, now that they've seen what I've done, [moved in programming] they all sniggered when I first went. Lots and lots of people not just women asked me if I'd took a drop in pay because I was the boss's secretary and wasn't just content to sit in that corner for ever

[Extract from transcripts]

At this point in time my relationship with women is pretty good because I'm not the supervisor of the area, but going back to when I was working across at CAD there was a lot of bitchiness between all the people downstairs, everybody seemed to be trying to outdo the other person, even then it got to the point where if you did something wrong you were a "stupid person" and quite often, if you showed other women that you wanted to go further and do more because all they wanted to do was have a 9 to 5 job and have a family at the end of so many years of being married, they thought you were sort of jumping on the bandwagon and they didn't like that. Those who'd been there for a lot more years than you, resented you because you were getting on and showing that you wanted to do something



else. There was a lot of resentment between the women.

[Extract from transcripts]

This suggests how the discourse of hegemonic femininity affects opportunities for women in organisations and illustrates that it is not only men who make suppositions about women, and this makes it more difficult for women who do want to move from the area of 'support'. The following extract suggests these contradictions,

Men seem to have a different way of looking at work. Work is a part of their life, that is accepted. You go out to work. You earn money. With women . . . it isn't a matter of course, it's something you fight for and just being a woman you have to fight harder than a man. You're more hungry. If you want promotion you're more hungry than men generally, I think. You seem to have to persuade people that you're serious, you're not playing at it.

[Extract from transcripts]

The contradictions this discourse produces at the workplace means that women are either reluctant to become project leaders or find it difficult to be considered for the role. The perception that women and men have different abilities and interests is based on the distinct discourses of hegemonic masculinity and femininity which permeate organisations.

I'm sure if you did a survey of the people in the department who had home computers, it's virtually all male. I don't think that any of the females, certainly that I know, would be interested in having a home computer or even playing games on one.

[Extract from transcripts]

I think a lot more of the men are more interested in the technical sort of programming side of it. I know a lot of people I know that are in computing, a lot of male people anyway can get very enthusiastic about software, writing programmes, only I don't get enthusiastic about that at all, but some people do and they tend to be mostly male the people that do. I don't know if it's just a traditional attitude that men are more interested in the mathematical problem solving type of work, very technical computing kinds. We have a few people, especially in operations who are seen as being kind of boffins almost. They are invariably male.

[Extract from transcripts]

This comments provides a link to the next element of organisational culture - the heroes and heroines of the industry.

#### **ORGANISATIONAL CULTURE: (ii) HEROES AND HEROINES**

The second element which is said to characterise organisational culture is the presence of heroes and heroines who epitomise the values of either the company or the industry. They may be the founders, leaders, product champions, inventors of particular systems, or even new styles of organisation. These people are the visible symbols of "what you have to do to succeed". In most organisations these heroes are exclusively men, because they are the people who have powerful positions in the hierarchies. The exceptions usually occur in professions and organisations directly associated with women. In computing, the hero is traditionally a young

man; retiring, inhibited, highly intelligent, a technical entrepreneur/inventor, who is prepared to work long hours, someone who not only 'thinks' (e.g. an intellectual) but a man who is also a 'doer' (e.g. practical), as illustrated by the following extracts in which two of the men interviewed spoke about the attractions of the job.

I like having the technical knowledge. You know, the use of the various programming languages. You can become stale with them, you know, when you've used it over and over again writing similar programmes all the time day in day out but I like, you know, the investigation, the loading, getting to know how to use the particular facility. We have some very complex subjects that we use and it was nice possibly 18 months ago to be investigating those, you know, for the first time within this factory and getting them up and running.  
[Extract from transcripts]

I can get called out in the middle of the night. There's certain of us old timers down here familiar with the ICL systems which are the ones that are currently under a lot of pressure, they're the ones that if you get a fail those are the ones they are going to occur on. There's only, probably three of us down here familiar with what needs doing in the event. The other senior section leader under my group leader and one of the lads who works for him and myself, there's the three of us and we're the whipping boys really. There's two of them sat through there now really committed to pulling through a system that's collapsed - then they will come out of there.  
[Extract from transcripts]



Both Murray (1993), and Wajcman (1991), provide discussions of the links between these values and masculinity and technology. Their studies demonstrate how this image of computing and it's leaders (heroes) produces the gendered nature of the industry (see also Kidder 1981; Easlea, 1983). Murray discusses the complexity and contradictions of this representation of 'heroes' of the industry in the following terms. He writes:

It is my impression that male IT staff and managers rather revel in the long hours they work. There is a tendency to glorify or accept as a technological inevitability the time they spend during the evening and at weekends at work. This separates out the IT man from the 'normal' business types; he might be a weird fish, and in the 1960s and 1970s he might have had long hair and strange clothes, but he could be relied upon to work long and unusual hours . . . There is a kind of Boys Own heroism about working these long hours. IT staff talk about preparing for the 'final push' and the 'muck and bullets' character of intense stages of project work. (1993, p74-75)

The following extract from the interviews is a further illustration of this attitude,

I think that there are one or two guys who are technically quite brilliant, there are a couple of guys here who are really very, very good on the technical side and you don't really see them as, you know . . . , they don't seem that interested in climbing the ladder, all they want to do is get to the machine more and more and more and more.

[Extract from transcripts]

People who demonstrate this type of obsessive interest in computers are usually referred to as 'techies' - and the majority are men. A small number of men in my sample admitted that when they went home, they played on their computers for hours. One of the women 'played' with the computer in this way, though many of them did have computers in the home, which contradicted the feeling amongst the men that women left the 'job' at the workplace.

I have my own computer so that's my other hobby. I mainly write programmes for myself. I like to make up programmes when I can think of something to programme. I write games for Adrian, the little one, and use the computer for doing my household budgets and such like

[Extract from transcripts]

When I remarked to the computer programmers I interviewed that women were the first programmers, their reactions varied from surprise to astonishment to disbelief. One of my male colleagues at the university where I work adamantly refused to believe the early involvement of women in the industry, declaring it a "feminist invention". The interesting question this gives rise to is: how do women computer programmers accommodate the notion that they are working in a 'masculine' occupation, where all the 'heroes' are male? The next section examines the values which govern computing occupations in order to explore some possible answers to this question.

## ORGANISATIONAL CULTURE: (iii) VALUES

Values refer to the basic concepts and beliefs of the organisation. They refer to "the way things are done here" and what is considered important and prestigious in a workplace. There is a relationship between the values, the business environment and the heroes, and they tend to be associated with hegemonic masculinity. These values frame the organisational culture and give rise to different expectations of men and women; and these differences, all shape and limit women's career prospects. Values are at the heart of organisational culture and they define "success" in very concrete terms for the employees. So for example, "if you sell like X, you will be successful", but success is not a sex-neutral term (Burton 1991, p22). As she explains:

**Behaviour important for men's success is not directly transferable to women because identical behaviour is not perceived or treated in the same way. (ibid., p22)**

Values are related to how the organisation wants to be perceived by their users. For example, some service industries view the public as guests or clients rather than customers, whereas in the computing industry, it is common to use the term users. The term 'naive' user is used to name people who have no computer experience, in contrast to 'wise', 'sophisticated' and/or 'knowledgeable' users. All of these terms indicate how the culture of computing is embedded in values relating



to knowledge production, and to notions of expertise. In the computing industry, the organisational values surrounding computer programming are shaped by the cultural status of technology, which in turn is shaped by the powerful rationalist discourse on science (see Wajcman 1991; Jordanova 1987; Harding 1986). A good example of these allied discourses is provided by Wajcman's discussion of computer hackers which illustrates the links between the cultural values of science and technology, expressed as "rational", "impersonal", "objective", "adventurous", "relentless", and masculinity. She writes:

Let us first return for a moment to the example of computer hackers and look more closely at the way manliness is represented here. One might initially describe their form of masculinity as the professionalized, calculative rationality of the technical specialist. What is interesting for our purposes is the way they mythologize their work activities in terms of the traditional 'warrior ethic' of heroic masculinity. The construction of the heroic is usually around matters of combat and violence between men. In fact, these mainly white middle-class men are nowhere near real physical danger yet they are drawing on the culturally dominant form of masculinity for their notions of risk, danger and virility to describe their work. (Wajcman 1991, p144).

This type of language is becoming increasingly common amongst men who use computer technology. Some time ago, at a conference on Technology and Education in the Social

Sciences<sup>4</sup> one of the plenary speakers, Professor Peter Cochrane, (the head of British Telecom's research department), provided an excellent example of this type of discourse. Throughout his presentation he referred exclusively to men and boys as the gender who use computer technology. The only time a woman was mentioned was in a reference he made to his wife. His talk was saturated with metaphors of war and flying, the terms, "crash and burn"; and "computer flying hours", were constantly used in order to dramatise the future developments in educational computer technology. When I challenged the discourse in which he conducted his analysis, I was told that my opinion was juvenile - an interesting comment, given the Boys Own language in which he conducted his presentation. A recent article in the *Guardian*, discussing the growth of the Internet, makes a similar reference to the culture of computing,

The Internet is a male world, a lone male world. It is self-seeking, self-serving, and self-fulfilling. Surfing shuts out all other physical and environmental contact and takes the user deeper into a world of "me", "my choice" and "fuck you". Not for nothing is the Net peppered with porn; not for nothing do the statistics show that most surfers are men and that the Internet holds less attraction for women. (Snow 19.9.1995, p15)

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<sup>4</sup> This was the first TESS conference held at the University of Stirling, September 1995.

This culture is also expressed in the remarks from many of the men and women interviewed in relation to programming.

I don't know if it sounds a bit corny, but I love the challenge I suppose. The fact that you're stuck with a problem and you've got to solve it. I like problem solving. I've got the type of brain I think that works in a reasonably logically way and it can pull these things apart and put them back again

[Extract from transcripts]

Well now that I've been programming for two years it's just that I want to take on a bit more. I feel I can cope with what I'm doing now. I want to expand and keep the challenge going really.

It's certainly rewarding, and it is challenging but now I've been doing it a while it's obviously less so which is why I want to move on a bit and the same really with the intellectual stimulation. I mean at first it was almost total but now I'm getting used to doing things it's not quite as much so and again that's why I want to try and expand it a bit

[Extract from transcripts]

There are some frustrations around the job. If you've done the same type of programming again and again and again it gets boring and you want to be working on new applications and new languages or new ideas, you don't want to be stationary

[Extract from transcripts]

There was an implication in some of the responses which seemed to indicate that women could cope with the boring, routine aspects of programming because of their patience and conscientiousness - 'natural' qualities - which men did not possess. Thus in order to keep men interested and alert they needed to be moving onto 'new' projects.



I have a personal feeling that I think that women tend to keep at the job more than men. That from my experience that they tend to be more reliable. They keep at the job longer and may be a little bit more responsible, not responsible, but more concerned, conscientious, that's the word, yes.

[Extract from transcripts]

I wonder if it's something to do with the fact that men maybe have got an attitude of being slightly cavalier, slightly you know, one of the boys, sort of thing and maybe they get easily distracted, I don't know.

[Extract from transcripts]

The discourses surrounding gender and technology will be discussed more thoroughly in the following chapter. It is however, important to note here the way these values shape the organisational culture of the computing industry, and the relationship between this culture and hegemonic masculinity.

It is also significant to note that women are not affected in the same way by the masculinity culture of computer technology. It may well be, as Flis Henwood points out, one of the reasons why some women are attracted to the industry. In her reference to the culture of computing, she points out that:

while women do reject technological work because of its association with masculinity, many others are attracted to it precisely because of this association. Technological work, even when understood as masculine, does not have the same meanings for all women. . . . 'masculine work' was understood as conferring status and power as well as 'manliness' upon its occupants, and women were found to have positioned themselves differently in relation to these meanings. (1993, p44)

## ORGANISATIONAL CULTURE: (iv) RITES AND RITUALS

A further element of organisational culture refers to the rites and rituals which are the systematic daily routines of life in the organisation. Rites and rituals range from regular meetings to more open ceremonial occasions such as Christmas parties, retirement parties, awards and bonuses. They demonstrate to employees what is expected of them, "how things are done here". Company rituals may also involve leisure activities: the company darts team, cricket team; one department in my university has an annual organised walk on the Yorkshire moors. At one of the companies I had access to, many of the male computer programmers and one woman, were campanologists. When I remarked that I found it surprising that so many of the computer staff had such an unusual leisure activity, I was informed that one of the directors, and a number of the heads of departments in the organisations, were involved. This leisure activity became a key ingredient of the informal cultural network of this company. One man remarked,

There was a saying at one stage that to get on in this place you had to wear a skirt and ring bells. Campanology is quite a keen hobby of most of the management in this area and it seems to be . . . tended to be female campanologists who were getting all the promotions. Now which of the two parts were the important one I don't know but that seems to not be so prevalent now.

[Extract from transcripts]

Rituals are also referred to as the "unwritten rules" (Deal & Kennedy 1982, p64) of an organisation, and in the culture of programming, it appears to be the case that one of the rituals is the willingness to work long hours, sometimes all night and every weekend. As has been suggested sitting up all night with a machine and then swapping the story with programmers and engineers is not unusual in software houses and is part of the culture of the industry.

you find that you have to work in the evenings or the night shift and you get yourself into a situation when you have to sit all day waiting to do something in the evening and you know your prime job is what you're going to do in the evenings if you want the CNC machine. When one of my people is doing something he may have to work at night to do it or from Friday afternoon to Sunday.

[Extract from transcripts]

These experiences increased the pressure and excitement, of the work. Similar experiences are referred to in the research by Murray (1993). Part of working in the industry is this expectation of an open-ended and flexible approach to the pattern of work. These practices form part of the informal network throughout the industry and brings me to the last element of organisational culture: the informal cultural network.

#### **ORGANISATIONAL CULTURE: (v) CULTURAL NETWORK**

The notion of a cultural network refers to the informal means of communicating the organisational values



and mythology of the firm. It is the conveyor of anecdotes, whispers, rumours and insider stories about how things really work. There are, however, different types of networks in organisations. The most powerful network is usually a male one, chiefly because of men's position in the organisation. The exclusion of women from the informal networks in which information and alliances are shared and developed has implications for job performance and career advancement. Since male domination of the top positions in organisations is a structural phenomenon, the same processes that tend to strengthen the fraternity of men reinforce the exclusion of women.

I found it annoying but it's a very male oriented industry this one. I mean there's only the business system here where you really see women doing jobs like this.  
[Extract from transcripts]

Things are getting better for women only in business systems. I haven't noticed it anywhere else because I haven't noticed any women anywhere else. You're talking about one woman in hundreds in terms of the amount of women to men in the company  
[Extract from transcripts]

It was a male dominated area for a great many years. What will happen in the future I don't know but go back ten, fifteen, twenty years and 99% of the people in this company would be male. So almost without a shadow of a doubt all the people in authority are male. You do find just the odd woman cropping up here and there in maybe a group leader position, or in a section leader role but they're a fairly recent addition. I don't see any way round that personally. They don't buy in

expertise very much, they promote internally.

[Extract from transcripts]

Reskin & Hartmann (1986) found that in order to advance inside organisations one must have active support from an individual who is established in the field. Sponsorship or mentorship is essential for progress, according to this study. Mentors take an interest in the development and careers of their protégés, providing introductions and information, and often vital instructions in technical and other aspects of the job. Because men hold a disproportionate number of positions of influence and so few women do, most available mentors are men. Men hesitate to take on women in this way because they fear that the relationship may be perceived as a sexual one, or that it may develop into a sexual relationship. I would like to suggest here that not only does sexuality interfere in the process of mentoring but it may also be an explanation of why men pay more attention to men in organisations than they do to women. 'Paying attention' to women can have sexual significance and connotations.

Cultural networks are also shaped by the managerial styles practised in organisations. In the companies I had access to a number of managerial styles were discernible, which are related to the two types of cultures which operate in the industry.

## ORGANISATIONAL DISCOURSES AND MANAGEMENT STYLES

Collinson & Hearn (1994) have identified five discourses and practices of masculinity and management styles which are common in organisations. They list these as: authoritarianism, paternalism, entrepreneurialism, informalism and careerism. The software houses are characterised by 'entrepreneurialism' and 'careerism', a discourse which according to Collinson & Hearn dictates that:

men as managers identify with other men who are as competitive as themselves, willing to work at a similar pace, endure long hours, be geographically mobile and meet tight production deadlines. . . . Research suggests that a deep-seated antagonism to women's conventional domestic commitments frequently pervades this organisational function. Only those women who can comply with the male model of breadwinner employment patterns are likely to be acceptable within this dominant discourse. These women are liable to be divorced with dependent children (1994, p14).

The living arrangements of many of the women I interviewed in these organisations directly conforms to this model (see Appendix 1). Though all of the women viewed their occupation as a career, the women who adopted a similar focus to their work to the one described by Collinson & Hearn above, in that they were committed to upward mobility and promotion, were generally divorced, single, or separated. The study also states that men use their occupation as a way of securing a "stable masculine identity" (1994, p15). The women I



spoke to used the notion of a career in order to establish independent lives and freedom from dependence on men.

The software houses were characterised by a more open, fluid managerial structure, which as one woman explained, enabled women who were prepared to concentrate only on their career, to operate on 'equal' terms with men.

No doubt about it, usually people only get on if they make a way for themselves, particularly in some company like Radola. I mean again in an 'in-house' computer department, it's maybe more structured and conventional and you might be able to take steps up a ladder at pre-determined times. Now, in a company like Radola that doesn't happen. You're judged purely on ability and opportunities.

[Extract from transcripts]

I found that in 'in-house' installations, the management style can be characterised as a mixture of authoritarianism and paternalism, though paternalism seemed to be the preferred strategy. The authoritarian style is characterised by bullying and aggressive masculinity, and there is a clear example of this type of behaviour from one of the men (a team leader at Business Systems Department), who is discussed later on in this chapter. Paternalism is defined by Collinson & Hearn as:

a polite, 'civilized' and exclusive male culture where women (and indeed younger men) are kept firmly in established roles by other male managers who are courteous and humane. So long as women conform to conventional notions of female identity, they will experience little hostility.

Within these protective practices, women are treated as too 'delicate' and 'precious' to be involved in the so-called harsh world of business. (1994, p14)

The atmosphere engendered by this managerial style was such that men, especially older men but some young men, as indicted by the following quote, felt able to state openly their opposition to married women working. This extract points to one man's fear that married women lower the rate and status of the occupation.

I am not keen on having families with two or three wage earners when there are other families who are having to survive or can't get jobs, but it wouldn't worry me if it was the woman who was earning the money and the man who was looking after the kids. So I don't think it is necessarily a woman's place to stop at home looking after the children. The only thing that worries me as a person working with multiple wage earners is the view that perhaps higher up the spectrum they might say these women don't need quite as much money because it's a second income so they're bringing home more anyway, so therefore we can lower the status of that job. The men who work will have to go down in status as well.

A. F. So when women enter a job they lower the status of the job?

Yes

[Extract from transcripts]

The reaction of the women to these attitudes is discussed in the next chapter and reveals the struggle some women computer programmers have in maintaining their subject position as women in the face of the conflicting

discourses and the male managerial practices which structure their occupation.

Using Collinson & Hearn's description of managerial discourses, I found that the strategy they identify as 'informalism' was very much evident in all the organisations I visited, and was adopted by the majority of the men I interviewed. I would argue that the ubiquity of this male practice indicates that it is not a 'separate' strategy adopted by the majority of men at work, but rather is a popular expression of hegemonic masculinity. Informalism refers to the way men cultivate informal friendship networks with other male colleagues by going for a drink in the pub after work, or having lunch together - in the pub - or supporting either the same or opposing football teams, or by organising fantasy football competitions. Most of these activities exclude the majority of women and some men. All the companies I visited were characterised by this type of male behaviour, which as Collinson & Hearn point out, is an accepted and expected masculine behaviour that enables men:

at various hierarchical levels [to] concentrate on humour, sport, cars, sex, women and drinking alcohol. In the worst case, these informal and aggressive dynamics of masculinity in the workplace may also result in sexual harassment, the reduction of women in the organisation to sexual objects and, where career successful, the undermining of their competence on the grounds that they must have used their sexuality to secure hierarchical advance. (1994, p14)



Besides the incidents of sexual harassment which have been mentioned in chapter six, there was only one instance where women as sexual objects was referred to. One man stated,

I can remember times which I suppose you'd consider discrimination when the fact that someone was a pretty unmarried woman might have been taken into account, but that's pretty rare, we are against that I can tell you.

[Extract from transcripts]

Collinson & Hearn make the point that these types of practices produce a precarious unity between men. The authors also address the relationship between these practices in relation to aspects of hegemonic masculinity. Yet, their discussion neglects to consider the impact on the women who work with these men. The article discusses an important dimension of hegemonic masculinity without reference to hegemonic femininity and thus replicates a common mistake of the 'new men's studies'.

#### IN SUMMARY

The problem with the organisational culture of computer programming is that it makes it extremely difficult for women with domestic and family responsibilities to compete on the same terms as men. In software houses, this is especially heightened, given the small staff base. Thus, the demands of the job are such that, especially in the small companies, it is expected

that programmers would work weekends and most evenings, sometimes into the early hours, as a matter of course. The only people who are able to conform to these practices on a regular basis are single people with no outside responsibilities; or a person, who has someone to service them, usually a wife (see Murray 1993, p72-76; Collinson & Hearn 1994). It is notable that none of the five women I interviewed who worked in software houses had conventional nuclear households. Two of the women who had children were separated from the father. The others were childless, and with one exception, lived alone. The organisational culture of software production determines the gender of the person who receives promotion; who 'succeeds', who gets the responsibility for a project, and who acquires the 'powerful' positions in the organisations.

In his discussion of this culture Murray argues that:

there is a strong and 'naturalized' cultural connection between masculinity and science and technology. This is not surprising given masculinity's attempt to define itself by its monopoly control of reason, logic and objectivity. This symbiotic relationship of mutual interdependence has not been easily achieved. Rather, men have struggled to keep women and the feminine out of their masculine domains and when unsuccessful have attempted to ensure that women interlopers make a choice between their gender identity and membership of the science and technology 'fraternity' . . . In other words, to 'take the toys from the boys' threatens those boys with the removal

of one of the symbols that makes them feel like boys and, significantly, not girls. Without those 'toys' (the whole array of technological artefact and culture) the boys would no longer be boys as they and we know them. (Murray 1993, p76-78)

I would agree with Murray's contention that there is a 'naturalized' cultural connotation between masculinity and computer technology and that these 'toys' are significant for male subjectivities. His work identifies a convincing link between the culture of computer programming and the discourse of hegemonic masculinity.

One of the topics I discussed in my interviews with both female and male computer programmers was this notion that men are more technically minded, therefore more attracted to computing than women. A common response to this question from a number of women was that :

There's nothing particularly technical about computing. If anything it's more, a logical thing, it's so you've got to be able to follow things logically. You've got to think, to do things orderly. I would liken it more to accounting than say mechanics or engineering, if you see what I mean.

[Extract from transcripts]

You do need a logical mind and without sounding sexist a lot of women don't have it but there again a lot of men don't either, they just don't happen to go into that particular industry and nobody questions that or the men that do end up in computers have those logical minds but the women who end up in computers have logical minds and if you cross-section this type of industry, well not just this kind of industry, but industry generally in proportion women to men I'm sure there can't be that many women working in computers than there are in other areas,



except personnel, obviously that tends to  
be a bit of a female ghetto doesn't it.  
[Extract from transcripts]

Women then operate within computer programming by downplaying the 'technical' aspects of the occupation. And this despite the fact that women's relationship to technology is diminished by a number of discourses: the discourse of hegemonic masculinity, the organisational discourse of the computing industry, the discourse of science and technology, and finally, the discourse of hegemonic femininity. All of these discourses re-inforce and sustain each other, as demonstrated by the following quote.

Women still tend to be afraid of machines but when shown properly they do adapt. We have two secretaries and when they first got their word processor and printer and the printer failed they wouldn't try themselves to fix it. They'd just ring for a technician to come and sort it. Now if it fails they do it themselves. So I think initially women, you know, don't like it but once they're shown, they'll do it. I mean technical things, like my car, if my car goes wrong I would rather, if I can afford it, I'd rather send it to the garage and get someone to mend it. I don't want to be under the bonnet getting my hands dirty and you know I think we tend to do it because we do those sort of things anyway. You tend to think your husband mends the car. You know.

[Extract from transcripts]

The reader may recall the incident cited in chapter three from *Women on the Line* which illustrated the contradictory and complex nature of women asking men for

help. Interestingly similar incidents of women asking for 'help' for similar reasons were found amongst the computer programmers, as is illustrated by the following quote:

I tend, if something happens with a computer, that involves taking the lid off it and having a look inside I tend to go straight to Mike and say "Mike, my computer's gone wrong" and I'm quite capable. I've done it before and I know I could do it again, of getting a screwdriver and opening the thing up and doing it myself. But I go to him and say "This has gone wrong or whatever". But on the other hand, I mean, that maybe is because I knew Mike was technical when he came in. He's got an engineering degree.  
[Extract from transcripts]

The next chapter seeks to explore further the ways in which the discourse of 'hegemonic femininity' reinforces and supports aspects of the cultural and organisational discourse of computing and contributes to the maintenance of occupational segregation in the industry. Following on from the preceding chapter, in which aspects of the organisational discourse shaping software production produced contradictions between the public sphere of work and the private sphere of family, for some male computer programmers, the next chapter explores the contradictions for women.

## CONCLUSION

This discussion of organisational culture has demonstrated the extent to which the culture of computer programming is embedded in the discourses of masculinity

rather than femininity. Assumptions about gender permeate the selection and recruitment of team leaders and there is a suggestion that women because of their domestic role do not 'fit' with the culture of the industry. Men enter and are present in organisations in a different subject position from women in that it is expected that men have careers whereas women have to struggle to be taken seriously as workers. The extent to which the culture of computer programming is shaped by the discourse of technology and science further intensifies the dominance of masculinity as a key aspect of organisational culture. "Organizations", as Collinson and Hearn argue, "became the prime social unit of men's domination" (1994, p6). They state that: 2particular masculinities are frequently embedded (but often unacknowledged) in organizational power relations, discourses and practices" (1994, p10).

Computer programming takes place in male work environments. Computer technology is represented as a masculine technology not a feminine one. These problems are further exacerbated in organisations with managerial strategies of paternalism, as entrepreneurialism appears to be more favourable to women. Thus the culture of computing, though reproduced in differing degrees in the two types of organisational cultures where computer programming occurs, makes it extremely difficult for women to operate on equal terms with men. Yet, very few



women or men characterised the workplace as one which reinforces gender divisions and gender inequalities. There is even a suggestion that having women workers is in itself evidence that organisations are gender neutral rather than gender biased. The extent to which hegemonic femininity is a subordinate discourse in organisations and the contradictions for women is the subject of the next chapter.

## Chapter Nine

### DISCOURSES OF FEMININITY

It would appear that the discourse of hegemonic femininity, in contrast to the discourse on masculinity, militates against women being taken seriously in organisations. This chapter explores the contradictions of these discourses for women computer programmers, especially in relation to their gendered subjectivity. I am interested in exploring how women computer programmers negotiate, resist and transform this environment, "in such a way as to create a position for women within technological work that allows them to be both technological and feminine" (Henwood 1993, p45).

In order to address this issue, I construct a typology of hegemonic femininity and use this to suggest some features of this discourse. There are two principal discourses which constitute hegemonic femininity: the discourse of sexuality and the discourses of domesticity and the family. I am using the term domesticity to signify the reproductive and productive relations expected of women in the home. The power of the discourses that constitute women's place in the home is based on the 'naturalness' of women's capacity to bear children. Women's subjectivity is critically constituted by the idea(1) of wife and mother and the notion that it is only through these 'roles' that women can be fulfilled. I begin by outlining a typology of this

discourse which should help to illustrate the dilemmas and contradictions facing women computer programmers in the light of the competing discourses of femininity, technology, masculinity and organisations.

**Table 17: Typology of the Hegemonic Discourse on Femininity**

IMAGE	OBSESSIONS	OCCUPATIONS	TRAITS
Slim	Body	Housewife	Dependence
Attractive	Beauty	Mother	Emotional
Petite	Clothes	Carer	Close to nature
Beautiful		Volunteer	Maternal
Tall	Love	Domestic Work	Open
Well groomed	Romance	Paid Work	Caring
	Desire		Domestic
Sexually	Passion	Nurse	Devious
Attractive to men	Sex	Teacher	Sly
Sexually inexperienced	Looking for a man/to father:	Secretary	Competitive with women over men
Virginal		Typist	Bitchy
		Cleaner	Not trustworthy
Fertile	Babies	Shop Assistant	
	Children	Unskilled factory work	Emotionally strong
In relationship a	Food	Part time	Courageous
Maternal	Home		
Domestic	House		
Stands in a certain way	Private/Domestic responsibilities	Cooking	
Sits with legs together		Sewing	
	Keep Fit	Subordinate	
	Sport	Lacking ambition	
Wears Frocks		Powerless	
Lipstick			
Never alone			

**CONFLICTING DISCOURSES: FEMININITY & ORGANISATIONS.**

As has been discussed in the preceding chapter the central beliefs of organisational discourses are: (i) the presumed gender neutrality of a worker; (ii) that organisational rules and expectations are gender neutral; (iii) the expectation that work is separate from home, and consequently (iv) that the organisation has first claim on the worker's time. Pringle's book *Secretaries Talk*



(1988) addresses some of these issues and problematises the study of organisational discourses by focusing on power and pleasure in relation to the discursive practices of gender in organisations. Her work provides a different approach from the traditional accounts of women's working lives. As she states:

The focus here is on the relationship between secretaries as an identifiable social group and the discursive construction of secretaries as a category; on the relationship between power structures and the day-to-day negotiation and production of power; on the connections between domination, sexuality and pleasure.  
(1988, px)

She questions the assumption of 'rationality' which ideologically structures organisational discourse and explains the relationship between a boss and a secretary as 'irrational' in Weber's 'ideal-type' characterisation of organisations. She argues that the boss/secretary relationship is similar to traditional, affective ways of thinking and acting which she equates with familial relations. There is however a lack of clarity in the discussion of the 'irrational' nature of the relationship, between familial relations and the discourse of sexuality. She also has a tendency to collapse the two discourses into each other, which obscures the explanation of these relationships. For example she argues:

It may be argued that 'rationality' requires as a condition of its existence the simultaneous creation of a realm of the Other, be it personal, emotional, sexual or

'irrational'. Masculine rationality attempts to drive out the feminine but does not exist without it. 'Work' and 'sex' are implicitly treated as the domains of the 'conscious' and the 'unconscious'. But far from being separate spheres the two are thoroughly intertwined. Despite the illusion of ordered rationality, workplaces do not actually manage to exclude the personal or sexual. Rather than seeing the presence of sexuality and familial relations in the workplace as an aspect of traditional, patriarchal authority, it makes more sense to treat them as part of modern organisational forms. I am concerned here not with 'actual' families but with the family symbolism that structures work as well as personal relationships. The media, advertising and popular culture are saturated in such imagery, which provides a dominant set of social meanings in contemporary capitalist society. (1988, P89)

Pringle (1988) is correct to point to the complex interplay of the various discourses on sex which get played out in the workplace. Using a Foucaultian framework she also argues that 'male power' is not simply imposed on women but is a contradictory and complex part of the process of gendering at the workplace.

The text provides a case study of the strategies and counter-strategies used by secretaries in organisations, and the way they negotiate their way through the conflicting discourse of femininity, sexuality, domesticity, and organisations. Pringle's concentration on the discourse of sexuality tends to obscure the other aspects of hegemonic femininity which inform the gendering process. The discussion of feminism is a good

illustration of this. In the text, she discusses how secretaries are portrayed by feminists as either the 'victims' or 'dupes' of men. She mentions this characterisation in her interviews with secretaries, and reports on the dilemma this characterisation posed for them. She concludes that, whilst most wanted equal pay and equality of opportunity, they were wary of the label feminist, which they perceived as either 'man-hating' or as women attempting to become 'men'. She writes:

Feminists are seen as both strident and joyless, obsessed with 'finding a rapist behind every filing cabinet'. In seeking to remove sexuality and femininity from the workplace they threaten to remove not only dangers but also pleasures. (my emphasis) Secretaries do not necessarily want to take on 'masculine' work profiles and career goals, develop new skills, or perpetually be off on training courses in order to become part of management (1988, p100)

A number of questions are posed by this. Firstly, why not? What is it about these aspects of work which secretaries, women, reject? Is it simply the 'masculinity' of the work profiles, or do the conflicts and complexities of other discourses which shaped women's subject position as workers also need to be considered? So, for example, the reasons why "secretaries do not want to take on 'masculine' work profiles and career goals" could also be explained through the discourse of domesticity. It would be difficult for a women with household responsibilities to "perpetually be off on



training courses". The studies on women returnees, both to work and education, would indicate the enormous difficulties encountered by women in attempting to combine household management, child care and a career. There is some indication of the difficulties experienced by the women I interviewed and there is also research in the 1980s which outlines how women's working lives are different to men's (Martin & Roberts 1984).

Women tend to have a two-phase pattern of economic activity, of working before they get married and have children, and going back to work when the children either go to school or go to nursery. Both the number of children and their ages affect a women's participation in paid work. Overall it is the age of the youngest child, and particularly a child under five, which is the main determinant of whether or not women work outside the home and whether or not they work full time. Women also experience a sequence of caring responsibilities. One in five women between the ages of 35 and 49 is looking after an elderly person, and one in four between the ages of 50 and 64 is looking after a sick or elderly relative (Martin & Roberts 1984). A lot of women's energies are sapped by the conflicting demands of these various roles. As the studies of women and work argue, "full-time women workers still regarded themselves primarily as 'housewives', their husbands as 'workers'" (Pollert 1981, p115). So whilst I am very drawn to an analysis of

women's paid work which analyses how discursive practices mediate gender and work, there is a problem with explanations which simply concentrate on the discourse of sexuality and neglect other aspects of hegemonic femininity. However the way in which women interpret the meaning of 'housewife' and 'mother' cannot be simply assumed.

#### **MANAGING FEMININITY: DIFFERENCES AND SIMILARITIES**

None of the women programmers I interviewed defined themselves as primarily mothers. Despite the small sample, an analysis of the women's living arrangements (see appendix 1) shows seven different practices. Of the nine women who were single, one lived with her parents, two lived alone and the rest with their partners. Eight of the women were married with children. There were five married women with no children. Of the six women who were divorced or separated, two had children, and one woman was widowed with two children. When the women discussed their individual connection to paid work and domestic responsibilities, a complex relationship is revealed. The simple dichotomy presented in the Pollert quote could not be applied here. Rather, what was revealed was the different ways these women struggled to maintain their subject position - a way of being a woman - of dealing with their domestic responsibilities while at the same time managing the contradictions and

conflicts of the organisational discourses encompassing computer programming.

The concept of "contradictory subjectivity" discussed by Henriques et al. (1984, p118) is a useful conceptual tool for analysing the impact of these competing discourses on women's subjectivity. This concept alludes to the way the experience of conflicts and contradictions in subjective positionings need to be managed by women continually. This management process is part of the way women perform gender at the workplace, and by these practices gender both the occupation and the organisation. Using this type of analysis it is clear that women are active agents in the process of gendering at work. Women negotiate, resist and manage the contradictory and conflictual discourses they encounter in organisations. At the same time, they reconcile the conflicts these practices produce for their subject position as women. The way these discourses are 'managed' by women are, however, structured by the discourse of hegemonic femininity. This discourse shapes the manoeuvrability women have in reconciling the different discourses.

As demonstrated by the typology of this discourse, women are defined as primarily domestic and maternal. This assumption is based on men and women's biological differences. The strength of the discourse of hegemonic femininity and hegemonic masculinity lies in the supposed



naturalness of the sexual division of labour. As Weedon states:

Being a good wife and mother, as these roles are currently defined, calls for particular qualities, thought to be naturally feminine, such as patience, emotion and self-sacrifice. These expectations about natural femininity structure women's access to the labour market and to public life. Common sense tells us that women are best suited to the service industries and 'caring' professions and that the 'aggressive' worlds of management, decision-making and politics call for masculine qualities even in a woman. Yet are masculine qualities in a woman quite natural? (1987, p3)

A number of the women used this type of 'common-sense' to explain their relationship to work. Almost all the interviews reiterated these views on women's work and men's work, but did not see their own work in these stereotypical ways.

Well I think a lot of men see their job as important and so they're looking for something that interests them and if they want they can get on and have promotion and I think men feel it's sort of part of their manliness, their job. It's part of a man - I think a job is part of him. The home is a lot to most women I would say; it's just something they do. Most get married and have children and when they've got children it's something they do to bring in extra money so they can go to Spain for holidays or whatever, you know. It's not so much, it's an extra to a woman rather than sort of part of her, part of them.

A. F. Do you feel like that about your job and your wage?

No, not really because I feel I'm quite involved with the work. You know, I'm quite willing to put in as much overtime as I have to, if necessary. You know, I was here till half past seven last night. . .

. I feel, to me it's quite an important part of my life.

[Extract from transcripts]

The material from the women computer programmers I interviewed suggests how they try to reconcile their occupation with notions of femininity and motherhood. The inconsistencies and contradictions revealed by their responses indicate their struggle to reconcile the contradictory discourses which shape their occupation. One of the key responses to my questions about childcare and household arrangements was the theme of choice. The majority of the women talked about their decision to work or stay at home. They felt they had choices - that this distinguished them from men and gave them a privileged position. Women used this notion of choice to feel that they were more 'equal' than men in that they had the freedom either to work or not, which they felt men did not have. Whilst at work however, they were aware that this 'choice' did not provide them with any status and they were conscious of the lack of status of housework and childcare in organisational discourses. The tensions produced by these competing discourses were managed by women in different ways.

Karen had acquired the status of a 'heroine' at *Business Systems Department* as she is the only women from the data preparation department who moved into programming. She was continually being referred to in interviews, by both management and the other programmers,

and is generally held in high esteem by the majority of people in the department. I interviewed her at home, as she had just given birth to her second child, and she had this to say about how she viewed women's relationship to work:

Women will leave anyway and have families. Men go to work because to a certain extent they've got to and they're looking to get on as well as they can, in whatever area they've chosen. I would say a lot of women go to work for the company, you know, for the little bit of extra money, but to a certain extent they have a choice, or most women have a choice. I think that's the only difference in attitude and that obviously could colour the way . . . the effort they put into it.  
[Extract from transcripts]

In common with a number of other studies, it is notable that Karen, when speaking in the abstract, about women in general, repeated a common discourse on women's attitude to paid work (see Collinson 1992). When speaking of her own work, Karen said:

Alright I've always had a choice but I would always choose to work. It isn't just the company, it's the stimulus. I think that I don't find being at home stimulating enough. . . . Certainly, I mean, the money is an added attraction but when you've got kids you've got to pay for somebody else to look after them. Obviously the money side of it, you know, dwindles a bit - you're not sort of getting as much extras as you would say without children. I think if I was a millionaire I would still work so, well I don't think money so important as I find it stimulating and I find that I need to work, as if were, for that reason.  
[Extract from transcripts]



The issue of 'choice' is related to the attempt to reconcile the conflicting discourses of work and home, whilst maintaining a subject position as a woman and a worker. I asked if they thought that programming is more a 'man's' job than a 'woman's', and they appeared to find this question difficult to understand. Their responses indicated that did not interpret computing programming as a particularly masculine occupation, or as particularly technical. Rather than mention the different types of programming women do in comparison to men, they tended to respond in terms which were very similar to the descriptions given by the men in my sample. They used terms like "challenging", "stimulating", but their main emphasis was on job "satisfaction".

It is interesting to consider how these women are able to use generalised notions about women's work and men's work and reconcile these ideas with their desire to work, particularly since they were forced at times to defend their presence in their organisations. The next section attempts to suggest some of the ways women manage these contradictions.

#### **COPING WITH, RATHER THAN RESISTING FEMININITY**

In particular women with children were forced to defend their decision to take on paid work. They encountered hostility from male colleagues and from partners when they continued to work. The fact that a woman is held in high regard as a co-worker, as in the

example of Karen, did not shift the antagonism expressed towards her by some men and some women workers. She told me that some men had said to her that "it was greedy for married women to work as it meant two wage packets in one house" and "why have children if you are not going to look after them"?

When I first got pregnant and said I would be returning to work, some men tried to talk me out of it.

A.F. What did they say?

Well, one chap said he believes that maternal instincts are so strong that there's no way that any woman could possibly come back to work. He was a complete idiot, mind. So there was a bit of that until I did come back. And I found up to then I was never taken as seriously as the other blokes . . . but I think I was seen as a woman, that is probably likely to leave and have a family and that's the end of it, sort of thing. Once I came back it was completely different. Once they realised I was serious, then a different attitude was displayed altogether. I think I was almost a different person coming back, in that I was more responsible. I was different and I don't think it was necessarily having a child that did it, it was just the fact that, you know, they saw me differently and I responded.

[Extract from transcripts]

Some men (and some women) felt confident expressing these traditional views principally towards women with young children. The women who had children but no husbands, despite the fact that they may have partners, were generally exempt from criticism. The women said that they took little notice of these remarks, saying that the

men who voiced this opinion were the older men in the organisation. Similar comments from women were received more problematical, the women admitting that they felt deeply hurt by their remarks. The following quote illustrates this problem.

I hear the suggestion that women with children shouldn't work. . . . I'm certainly aware of people here that don't approve. I don't think you've got the particular person I'm thinking of on your list. There are people I know of, who I work closely with, who are of the opinion that women, certainly with young children, that it's very wrong for them to be at work. They should be at home, with the children. I don't know so much that just by the fact that you are a woman you shouldn't work. I don't know people who believe it's wrong for women to work, just for a mother.

A. F. How do you feel when you hear that kind of comment?

Well I mean we treat it as a bit of a joke, because I know their opinions and they know mine, but I suppose I was surprised at the people who did feel that strongly. . . . but everybody's entitled to their opinion. . .  
[Extract from transcripts]

Another women said that if women choose to have children, then they must be prepared to suffer the consequences of this 'choice' for their position and status in the workplace.

Women do leave to break their career up or whatever; to have children, to bring their children up and when they come back they can't expect to be at the same place as they were when they left or the same place as the men were when they left, if you see what I mean. You obviously make the decision to leave and have children, then



you sacrifice something in your career . .  
. I don't think that you can expect things  
to be put on a plate for you.  
[Extract from transcripts]

There was no collective response to this problem by women. They each had devised their own individual answer. Some shrugged it off, taking little notice of the remarks and dismissing the people who made them. Others felt hurt and upset and responded to the comments by "keeping their head down" and working hard. As mentioned above for one woman, Karen, her determination to return to work after the birth of her second child had unexpected consequences.

#### **MANAGING WORK AND CHILDCARE**

Karen encountered a number of oppositions in her determination to continue working full time as well as caring for her two children. She spoke to me of the difficulty with some of the men she worked with, when they realised she intended to return to work after her maternity leave. She also commented on the unexpected consequences of her return: the effect on her attitude to her work, and on the changed perceptions of her work colleagues, and the manager of the section. Once Karen decided that she was not prepared to take their opposition seriously, this changed both her male colleagues and the management's attitude to her as a worker. By her actions in relation to child care, she felt that she was taken seriously as a worker. Karen did

not view this shift as either a threat or a reversal to her femininity, because she has taken into her subjectivity - her sense of self- the notion of the gendered neutral worker. While she was aware of the difficulties of her position as both mother and paid worker, she did not see her actions as contradictory or conflicting.

Other women, were angry about the hostility they encountered in relation to their role as mothers. Some women with children were conscious of the tensions produced by the choices they were making, but generally expressed the belief that attitudes towards women working had changed. They explain this change either by reference to shifts in the discourse of hegemonic femininity or to the view that the gender neutral stance of organisational discourse had changed. The sentiments expressed in the following quote are indicative of some of these views:

Women are changing their attitudes now, because "why should they stay at home", or certain ones are objecting to staying at home. They want a career as well as a home life bringing up a family. I found I was only at home for five months and I was bored to tears. It just wasn't stimulating enough and my husband didn't want me to come back to work and I said I'm sorry I can't stay at home, I've got to come back to work. It was destroying me.  
[Extract from transcripts]

The quote above indicates that women also encounter opposition from their partner's in relation to the time

and effort they expend on their paid work. They deal with this in a number of ways, from 'training' men to take on more housework or more usually by doing most of the work themselves, either early in the morning before they go out to work, or in the evenings and weekends. Karen was one of the few women who had struggled with her partner to have a more equitable sexual division of labour in the home. She told me how she had 'trained' him to do his share of the work.

I trained him. He's very good with children for a start. That's a natural thing but it was always understood from the beginning of our marriage that everything was down the middle and I have to do, you know, some of the horrible jobs, like mowing the lawn and messing about with the car, if necessary. . . . I mean he didn't like the idea at first but it was that or not having children.

[Extract from transcripts]

The majority of the women I interviewed, cope with, rather than challenge their responsibilities for domestic labour. They were expected to do it, and they did. They attempted to square the circle of running a home and keeping a full-time job. Their lives were tightly scheduled and organised with very little space for leisure or pleasure. The following quote indicates the tensions and stress involved:

The times I've gone home and I've thought "Oh, God. I've forgotten to do this, shall I rang him up at home and tell him"? and I'd think, "No, it can wait while the morning". He's at home as well, so. Hubby does tend to nag at me sometimes saying "you spend too much time at work, you know,



slow down a bit you're not doing yourself any good by working all the hours you are doing". I don't think married life has changed me so much as the job's changed me, you know, the new job. Certainly before that, it was half past eight to five and that was it. Now it's nothing unusual if I'm here Saturday, Sunday some weeks.  
[Extract from transcripts]

There were four types of responses from women to the tensions produced between their 'work' lives and their 'family' lives. As I have shown (i) some women concentrated on organising and reconciling the demands by adopting a 'work' model in their organisation and a 'gender' model at home. They appeared to rationalise this by referring to the fact that they had made a 'choice' and there were certain consequences to that choice. (ii) A few women tried to negotiate shared responsibilities in the home. (iii) Women bringing up children on their own were the group most likely to adopt a strategy of careerism, which is very similar to the male model described by Collinson & Hearn (1994) and Tolson (1977). This means that they attempt to operate inside organisational discourse by concentrating on their careers, and paying somebody else to clean the house and look after the children. From this group there was a lack of awareness of the contradictions this discourse creates either for themselves or other women. They tended to be unaware or refuse to acknowledge the gendered nature of either the organisational culture or the computing industry. (iv) The last group of women are

those who attempt to challenge these discourses by struggling against the culture they encounter at work, by asserting their position as women workers in organisations rather than 'passing' as organisational men. They do this by asserting their femininity. One woman explained how she used her femininity to give her an 'edge' in the organisation.

A woman in a totally male environment, well . . . [it depends on] . . . the woman. I think most women in a totally male environment can handle [men] because all your life you're used to being flattered by men and you've grown up with it so you've learnt to backchat and you've learned to cope. Whereas you put a boy, a sixteen year old boy down in data prep with all those women, he'd die because you know, they just can't handle it because they're not brought up like that.  
[Extract from transcripts]

There are then a number of positions that women adopt in managing the competing discourses which constitute their gendered position in the workplace. One of the consequences of the different practices adopted by women means that alliances between them are difficult as some women are 'attending' to domesticity in a manner which contradicts other women's attempts to develop a career. The first group help to keep in place a critical aspect of hegemonic femininity, especially the notion that domesticity is women's primary responsibility. None of these women resisted the discourse of domesticity, rather they accommodate and cope with the demands of both domestic and paid labour. While some felt that men

should 'help' in the home, others voiced the opinion that women must reconcile the conflicts between the different jobs by working harder. If all the work at home is 'attended to' in this way, then their presence at work is not incompatible or problematic for their subjectivity as women. Nor is their work conflictual for the gendered culture of either the occupation or the organisation.

Another contradiction is that because domesticity is not challenged and continues to be a strong element of the discourse of hegemonic femininity, women have to work very hard in order to be taken seriously as workers. Even for those women who are divorced and separated, or who choose to live on their own, their position as paid workers is structured by this element of the discourse of hegemonic femininity. Women are working hard to keep up with what they consider to be their domestic responsibilities, but they also work hard to be 'organisational men' in order to maintain their status as workers in the computing industry. Thus in order to prove to their colleagues and to their management that they are 'serious' workers, the women work much harder than men.

#### **WORKING HARD TO BE TAKEN SERIOUSLY**

The men and women I interviewed casually informed me that women worked harder, and were more conscientious, than men. Women were also aware that they had to work hard in order to justify their presence in the



organisation. These differences between the behaviour of women and men was explained to me, generally by referring to stereotypical notions of masculinity and femininity.

Men seem to have a different way of looking at work. Work is a part of their life, that is accepted. You go out to work. You earn money. With women they look on it far more seriously. It isn't a matter of course, it's something you fight for and just being a woman you have to fight harder than a man. You're more hungry. If you want promotion you're more hungry than men generally, I think. You seem to have to persuade people that you're serious, you're not playing at it.

[Extract from transcripts]

The women are very aware of the fact that they work harder than men, but they expressed this in terms of irritation and annoyance rather than anger. With one exception:

It bugs me that sometimes they'd rather talk to a man, but it's only because they're not used to talking to women and then they see me as the typist. I find it annoying but it's a very male orientated industry this one.

[Extract from transcripts]

This is the only example I have of a woman who was very keenly conscious of gender inequalities and the problems facing women working in 'male' organisations. She also told me that "she was not a feminist", but she believed in equal opportunities. The implications of being viewed, as 'not serious' means that women have a constant struggle to become valued members of their organisation. As Burton (1991) points out:

To fit in, woman have to take on some of the values and preferred ways of doing things in work organisations, which are grounded in men's, not women's experiences (1991, p33)

Karen had a very long struggle to move from the data preparation room to become a programmer. It did take her nearly two and a half years to make this move. When she finally shifted in the systems section, she had very little work for a further six months, until she began to 'fit it'. The following quote from Karen provides some indication of this struggle:

Well yes, I think that's the main problem, getting on, you know - starting. Being taken seriously to start with I think is the main thing. Once you are, then you obviously got the opportunities to sort of make your opinions known and you've got the contacts then. Once you get higher up the ladder as it were, . . . I don't know, I don't suppose they'd ever really consider at the moment having a woman as head of department for business systems, but you never know in ten years time they might.  
[Extract from transcripts]

It is difficult for small numbers of women in occupations dominated by a male culture to the extent that computing is, to change discriminatory practices in any dramatic way. Especially as initially, some women are struggling to overcome the notion that they are not as committed to their job as their male colleagues. An additional problem is that it is not only men who hold this view as was illustrated by the quote from Jean, the Applications Development Manager at Radola.

The view that women are not committed workers or that they are transitory, impacts on their working lives in a number of ways. For example, this attitude will affect women's chances to become a project leader. This will directly affect their salary, status and power in the organisation. The following account demonstrates the impact of this attitude on one of the women I interviewed. Unfortunately, in this case, the man who was treating this woman so dismissively, was also her line manager.

He'll deny it, but I'm always arguing with him about it, telling him that he doesn't treat me the same as the men. I'm a woman and I'm just like a skivvy.

A. F. What does he do?

Just generally the way he is to me, the way they are to me. I feel as if I'm just used as a skivvy but to be truthful I aren't as clever as some of those lads.

A.F. How do you know?

Because I know the work they're doing and I aren't as clever and I aren't as interested. . . . I just don't have the knowledge.

A.F. Are you sure?

It's too complicated really and I think it's enough for me, you know, what I'm doing. I'm quite happy, you know, at the level I'm at. I feel that if I wanted to get on working for George and the way things are I'd find it hard because I'm a woman. I feel that, because I think that's the way he looks on women. And sometimes, I mean, I've had a big argument with him because sometimes he's horrible. He doesn't mean it, he's a Greek and he



doesn't mean what he says, he doesn't know but he says some horrible things to me. And I applied to get out of the department one day because I was that fed up with the way he talked to me, how rude he was to me and everything, just putting me down all the time, as a joke, you know, making it funny, and I just felt that he was making me look stupid and showing me up in front of everybody.

A.F. So he was saying these things in front of everybody?

Oh, yes, and I said that I was going to leave the department and find a job somewhere else. He apologised and said he didn't mean to say it and he wouldn't say it any more but it starts creeping in again. He really insults me, but I don't think he really means to do it. I'm sure it's because I'm a woman and it's partly to do with it, but as I say I don't think I could get on a real lot even if I wanted to because of his attitude, but I don't particularly want to get on that much anyway.

[Extract from transcripts]

I interviewed George quite soon after this account - two days later in fact. Despite my best efforts, I felt antagonistic towards him. I was aware that my manner was cold and distant, though I have no doubt that he interpreted this as academic objectivity, and accepted my demeanour as that of an impartial researcher. I did my best to play this game as I was anxious to maintain the confidentiality of my interview with Gillian. His position as a group leader in the production control area, meant not only is he involved with interviewing and hiring staff, but he also co-ordinates the work of the

sixteen programmers in his section<sup>1</sup>. George, for his part, was charming, convivial, courteous. Throughout the interview he used the male pronoun (he) to refer to the staff. When I mentioned this to him, he replied that "sometimes it is difficult to understand whether I say she or a he". He was, however, very complementary about the women computer programmers in his team, he said he found them very "hardworking" people and that they "worked harder than men".

A.F. So why do you think women are more hardworking?

It must be in them, it's something, I haven't thought about it, but it's an observation, it's not an analysis, it's just an observation. I mean if you go to any office in here you'll see that women mostly have their heads down working. . . . I think it's in their nature to work harder. Don't you find that?

[Extract from transcripts]

The comments on women working harder than men contradicts Burton's (1991) argument that men "cannot afford to believe that women, doing both [domestic work and paid work], can perform as well or better at the work-place" (ibid., p8). My research would indicate that men could easily afford to comment on the fact that women worked harder than they did. The men did not appear to feel threatened or apprehensive about the differences between their work and their female colleagues. They were largely indifferent. I believe this is because, in the

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<sup>1</sup> Only two of these sixteen were women.

main, they do not perceive women to be a threat. They are competing with other men, not with women. Therefore they are concerned with cultivating male networks, with noting other men's activities, interests and ambitions. This suggestion would also be supported by the research on men in organisations conducted through the 'new men's studies', which indicates that men "often seem preoccupied with the creation and maintenance of various masculine identities and with the expression of gendered power and status in the workplace" (Collinson & Hearn 1994, p8). This is due in part, as Burton points out, to the fact that men's work tends to be rated higher than women's, by both men and women. As she states: "good female performance is perceived as due to effort, and good male performance as due to ability" (1991, p18).

Yet, the presence of women computer programmers, who manage a home and a full time job, working alongside men becomes part of the process whereby this discourse shifts and changes, though these shifts may appear to be imperceptible and uncertain. So for example, none of the women I interviewed described themselves as feminists, and not one of them expressed any anger that they were expected to take on domestic responsibilities, or appeared to consider it in any way problematic that men occupied all the powerful positions in their organisation.



Part of the explanation for this could be the centrality of child bearing and child rearing for hegemonic femininity. Unlike the men in my sample, they couched their attitude to children by using the term 'responsibility' rather than 'sacrifice'. Though a few women resisted,

No, I've never want to get married and I certainly don't want children.

A.F. Why?

I think probably the reason for it is . . . my mother was divorced, both my sisters have been divorced, one of them twice, and I've seen so much hassle with marriages and one thing and another. I suppose deep down inside me that's probably got something to do with it.

[Extract from transcripts]

## FEMININITIES

The 'ideology of sacrifice' which characterises men's attitudes to work, (see Nichols & Beynon 1977; Collinson 1992) is largely absent in the women's discussions of their paid work. The women spoke of the stimulation and satisfaction they obtained from their work. I expected this theme of 'sacrifice' to be applied to the family and the home but few of the women used this expression though they were very conscious of duties and responsibilities around children. The different responses by women to these 'duties' indicates the ambivalence produced by the hegemonic discourse on femininity, a discourse which gets its power from "its claim to be natural, obvious and therefore true" (Weedon 1987, p77). The majority of the women I interviewed used

this discourse to rationalise and interpret their position in paid work using a "biologically based common-sense". As Weedon explains:

Common sense consists of a number of social meanings and the particular ways of understanding the world which guarantee them. These meanings, which inevitably favour the interests of particular social groups, become fixed and widely accepted as true irrespective of sectional interests. . . . it looks to 'human nature' to guarantee its version of reality. It is the medium through which already fixed 'truths' about the world, society and individuals are expressed. (1987, p77)

All the women and men I interviewed used this type of discourse to explain why women do not occupy the same positions in the industry as men. This is also used to explain how women's relationship to work is different from men's. However, this shared discourse on hegemonic femininity and hegemonic masculinity did not establish the basis for solidarity and shared interests amongst the women. Just as the preceding chapter demonstrated, with reference to the discussion of masculinities rather than masculinity, in a similar way, hegemonic femininity creates femininities rather than femininity. As mentioned above differences can be detected amongst the women I interviewed in the way they coped with the discourse of domesticity and hegemonic femininity.

#### CONFLICTING DISCOURSES

The three distinct ways that the women I interviewed, cope with, rather than challenge hegemonic

femininity produced three types of femininities. The women who worked hard at combining their domestic responsibilities with their paid work resisted the element of hegemonic femininity which involved dependence - though there is an issue here of emotional rather than financial dependency. Women who have no child care responsibilities and adopted a strategy of careerism, which is very similar to the male model described by Collinson & Hearn (1994) and Tolson (1978), resisted the discourse of domesticity and relied on a "ideology of individual choice" (Burton 1991, p14) to explain their relationship to paid work. This group of women cope with the contradictions of their position by explaining the gendered nature of either organisational culture or the computing industry with reference to the problems caused by 'individual' men. The last group of women are those who attempt to challenge these discourses, by struggling against the culture they encounter at work, by asserting their position as women workers in organisations, rather than 'passing' as organisational men. However, there are differences here between the extent to which a woman 'uses' her sexuality, to give an 'edge', an advantage in the struggle between the conflicting discourses encountered at the workplace. An example of the way this process works is provided by the following extract from Weedon:

**Many women acknowledge the feeling of being  
a different person in different social**



institutions which call for different qualities and modes of femininity. The range of ways of being a woman open to each of us at a particular time is extremely wide but we know or feel we ought to know what is expected of us in particular situation - in romantic encounters, when we are pandering to the boss, when we are dealing with children or posing for fashion photographers. We may embrace these ways of being, these subject positions wholeheartedly, we may reject them outright or we may offer resistance while complying to the letter with what is expected of us. Yet even when we resist a particular subject position and the mode of subjectivity which it brings with it, we do so from the position of an alternative social definition of femininity. (1987, p86)

#### SEXUALITY AND ORGANISATIONAL DISCOURSE

There are two strong discourses which are critical to hegemonic femininity: the discourse of domesticity, and the discourse of sexuality. In the interviews I conducted, I attended to the relationships between gender, computer programming and domesticity. My aim was to provide an account of the dichotomies between formal/informal and public/private in the process of gendering at the workplace. My neglect of sexuality can be explained by the fact that the literature of the early 1980s on women's work and gender at work said very little about sexuality and organisations. References to women, sexuality and work, usually changed to discussions of sexual harassment. (Cockburn 1991, MacKinnon 1979). Sexual harassment was mentioned by a number of the women I interviewed. One woman would only talk to me about her

personal experience of harassment, if I stopped the tape recorder. Another woman spoke of the difficulty she had in getting the management to take the harassment she had suffered seriously. This problem was compounded by the fact that the harasser was also her line manager. She told me the story in the following way:

I mean, it was a small thing, but, he was a bit, well twice I reported him for sexual harassment, so you know, I wasn't very happy. I mean I quite liked him and everything but he was just, he wouldn't take me seriously. I got fed up . . . I felt I should have been on a higher grade than I was. I wasn't very happy with my career path either.

A.F. What kind of sexual harassment?

He just used to pat me on the bum now and again. You know, nothing excessive really, just annoying stuff that you know. And he used to make jokes, - sexist jokes in meetings, you know, with the users, and to a certain extent belittle me in meetings which I took offence to.

A.F. What happened when you made the complaint?

Well, they knew what he was like and they were quite [pause], I think, on both occasions they talked to him and told him, you know, he had to stop and take things a bit more seriously. He was just told, you know, to buck up a bit, that's all.

A.F. Did he take any notice?

Well, he didn't take hardly any notice the first time. I think the second time, actually ...they talked to him so it went a bit higher and he told him, that it was serious and they would have to do something about it if he carried on, so.

A.F. What happened then?

I think he was annoyed and he was probably a bit angry - he couldn't understand why I'd complained about it. You know, he just couldn't understand what I was making a fuss about.

[Extract from transcripts]

This women was moved into a department which was managed by a women, soon after this experience. Sexual harassment is a major problem facing women in organisations. Cockburn (1991), found that nearly every women she interviewed experienced some form of harassment. Examples ranged from men commenting on women's bodies, on women's dress, to touching, to using pornographic literature and sexist language and sexual banter (see also Sedley & Benn 1982; Wise & Stanley 1987). Sexual harassment is now recognised as an aggressive act from men towards women. The majority of this type of abusive behaviour is directed towards women: there is a very small amount of evidence which suggests that men can also be harassed by women. Therefore very little comparison can be made between women sexually harassing men, and men harassing women. The rarity of these incidents has not however prevented the huge commercial success of the play *Ollenna* (1994) and the film *Disclosure* (1995), two productions that deal with men as the 'victims' of harassment. There are no comparable (in terms of commercial success), plays, books or movies which treat the subject from the perspective of working women. I do not want to diminish the ubiquity of



sexual harassment and the problems caused to women; however, I want to argue that by concentrating only on sexual harassment, other aspects of women and 'sex' at work fade and become invisible.

Sexuality at work tends to be discussed in one of two ways. If the focus is the problems women encounter at the workplace, there is a tendency to collapse discussion of sexuality into a discussion of sexual harassment (see Cockburn 1991). If 'sex' at work is discussed in relation to men's workplace studies there is little mention of sexual harassment, rather 'sex' at work is mentioned with reference to sexual banter, sexual jokes. This approach is a common feature of ethnographic research of male workplace culture (Willis 1977; Collinson 1992), and features in some studies of women's work (Cavendish 1982; Pollert 1981; Westwood 1984). Cockburn (1991) suggests two functions for sexual banter. Firstly, that this practice can be used in male bonding and secondly it's role as a form of resistance to control at the workplace, both at the expense of women (see Burrell 1983). There are, however, very few studies which deal specifically with sexuality and gender in the workplace. The seminal works of Hearn & Parkin (1984), Hearn et.al.(1989;) and Pringle (1988), on the issues raised by this topic are exceptional as they retain a sense of the importance of sexual harassment as a problem for women at work, and manage to separate out sexual

harassment from discussions of sexuality. Pringle (1988) makes the point that it is too easy to characterise all relations between men and women at the workplace in terms of sexual harassment. She writes:

In naming and theorising sexual harassment feminists have drawn attention to the centrality of sexuality in workplace organisation. However, they have largely restricted sexuality to its coercive or unpleasurable dimensions. Radical feminists have emphasised sexual aggression and violence as the basis of men's power. If women experience pleasure it is treated as 'coerced caring' (Mackinnon, 1979:54-55). In these accounts either virtually all heterosexual activity may be labelled as sexual harassment or a line has to be drawn between what is harassment and what is 'acceptable'. (1988, p95)

These texts are not arguing that men exercising power over women in a sexually abusive way should be ignored, but that the literature on sexual harassment appears to be making the argument that sex can be eliminated from men and women's working lives. Part of the tension here is that 'sex' in organisations is constituted through the discourse of heterosexuality.

Sexuality is a powerful element of organisational life, for women as well as for men. Women have a number of particular problems with 'sex' at work, not simply in terms of sexual harassment, but because women's bodies are objects of sexual desire, for men but also for women. Men's bodies are also objects of sexual desire, for women and for other men. The pleasures of bodies and desire in

the discourse of sexuality, particularly given the key place this discourse plays in constituting hegemonic femininity means that 'sex' at work is particularly problematic for women.

The contradiction this poses for women is that organisational discourses constituted them as gender neutral, yet in hegemonic masculinity and femininity their bodies are 'sexed'. All human beings come with sexualised bodies to the workplace, and some of these bodies provide pleasure just in the gaze. It is not only men who are extracting pleasure from the gaze, by simply looking at women. Women are also women looking at men. Men's bodies are also sexualised by women. Women are also looking at other women, and men are looking at other men. How people are dressed is noticed, and commented on; the way people talk to each other is noticed and commented on; the sexual activity between people at work is watched and spoken of. All of these activities provide a source of pleasure. Given the body as a site of pleasure, fantasy and desire, it is not possible to eliminate the connotations of sexuality and sex from the workplace, despite the fact that the discourse of organisations is premised on the separation of the private work of sex from the public world of work. Sex at work cannot be discussed simply in terms of sexual harassment. Nor is it possible to shift the sexualisation of bodies. It may also be strategically



useful for sexuality discourses to become more overt in organisations as this would further expose the myth of the gender neutral worker.

Burrell's (1992) article *Sex and Organisational Analysis* is a useful study which provides an historical examination of the attempts which were made to try to desexualise the workplace and the resistance by workers to these measures. Burrell outlines the rationalisation process which governs these attempts to suppress the sexuality of workers in organisations. He mentions one of the problems as the lack of clarity around which activities can be designated as sexual activities. He asks:

How are we to recognise sexual activity?  
Are we to restrict ourselves only to that  
genital more generalized eroticism of touch  
and phantasy? Clearly there is the  
possibility of conceptualizing a continuum  
of sexual relationships in which full  
genital sexuality involving penetration is  
near one end of the scale whilst the other  
end is marked by a plurality of  
polymorphous pleasurable sensations and  
emotions. (1992, p72)

This raises the interesting question of the example of sexuality at work which I referred to above: is 'looking' a sexual practice? Burrell's account emphasises the importance of the elimination of sex at work for organisations as part of the attempt to discipline and control workers. In light of his account, I would suggest that one of the mechanisms for the control of

sexuality was to move women from the workplace<sup>1</sup>. The reason for this is, that through the discourse of hegemonic femininity, women's subject position has sexual connotations in a different way to men. As Burrell explains:

Suppression of sexuality, therefore, involved both eradication and containment, inside and outside work respectively. And these twin processes have continued to influence the lives of the worker since that time to this. Today then, we are presented with a situation in which human features such as love and comfort are not seen as part of the organisational world. In popular ideology, rightly or wrongly, they are associated with the home and the family. But this translocation is not accidental. Human feelings including sexuality have gradually been relocated in the non-organisational sphere - the world of civil society. Their expulsion back into the family, into private life and away from the world of work has been achieved by a whole variety of organisational forms. (1992, p73-74)

However, as Foucault's *History of Sexuality* (1979) helps to elucidate, the process of repression and resistance created a form of discourse on sexuality in organisation. Part of this discourse is the myth that sexuality and work are not compatible, but there is increasing evidence that organisations are saturated with bio-politics (Hearn & Parkin 1987; Hearn, Sheppard, Tancred-Sheriff & Burrell

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<sup>1</sup> The historic segregation and exclusion of women into jobs which are separate from those of men and which are less well paid is generally explained with reference to patriarchy and capitalism (see Walby 1986). The extent to which the discourses of sexuality and hegemonic femininity has shaped these practices is explained only in relation to male dominance, not in terms of the discourse of organisations.

(eds.) (1989); Pringle 1988), and this has implications for women, the process of gendering at the workplace and occupational segregation.

## CONCLUSION

This chapter shows the conflicts produced by the conflicting discourses of organisations and hegemonic femininity in relation to women's paid work. Women have to manage their domestic responsibilities away from the gaze of the organisation. The lack of a company policy on maternity and paternity leave, in any of the companies I visited, is another indication of the power of this discourse in contributing to the problems women encounter when they return to work after the birth of a child.

The different and inter-related discourses which affect the women and male computer programmers I interviewed are not fixed. The elements of these discursive fields are constantly shifting, being managed and negotiated. The way individual men and women use aspects of these discourses to give meaning to their experiences (their subjectivity), and to their identity as gendered individuals is therefore often precarious and contradictory. To maintain that women are always the 'victims' of male sexuality is to overlook the process of resistance, control and coercion between women and men, and also between woman and women and men and men in relation to the discourse of sexuality. In the next chapter I examine the discourse of science and technology



in order to suggest how this discourse works in the computing industry to further marginalise the discourses of femininity.

## Chapter Ten

### DISCOURSES OF SCIENCE AND TECHNOLOGY

In the previous chapters I discussed some of the discourses which shaped occupational segregation in the computing industry, in particular the gendered culture of computing and the links between this discourse and the discourses of science and technology. This chapter seeks to explore the impact of these discourses further by outlining the themes in feminists debates on the relationship between technology and gender. This is followed by an analysis of the responses from the women I interviewed to a question on their view of the technology which tried to capture the extent to which they were aware of the maleness of the computing industry.

The feminist literature on women and technology and gender and technology contains the following themes. First is the recovery of women's involvement in the development of science and technology, and the reconstruction of the historical development of women's 'absence' from the culture of technology showing that women were not simply passive in its development. The second theme is the identification of technology with masculinity and the extent to which technology is either a liberating force for women or an instrument of male power and control. This debate is central to feminist arguments on reproductive technologies and domestic technologies.

There is a tendency in these accounts to present women as victims of technology. This is because these debates are shaped by the concept of patriarchy which means that the problems of essentialism, universalism and ahistoricism which affect this concept pervade much of the literature. One of the first feminist texts which examined technology in women's lives begins by stating:

To talk about women and technology in the same breath seems strange, even incongruous. Technology is powerful, remote, incomprehensible, inhuman, scientific, expensive and - above all - male. . . . Ultimately, the power of modern technology emanates from the powerful people in our society, and reinforces their power. (Faulkner & Arnold 1985, p1).

This formulation of the relationship between women and technology is very similar to the feminist orthodoxy on gender segregation at work - and as explained in the previous chapters, the similarity is due to the conceptualisation of gender embedded in the concept of patriarchy. Differences between feminist's writings on technology can be explained in part by how they attempt to reconcile these problems and the conceptualisation of gender from which they frame their arguments.

#### **FEMINIST PERSPECTIVES ON TECHNOLOGY**

The feminist perspective referred to as eco-feminism by Gill and Grint (1995, p4) whose theoretical framework is a variant of radical feminism, makes a very strong link between masculinity and technology. In this



perspective technology is used by men to oppress and subordinate women. Examples of this perspective on the relationship between gender and technology can be found in a number of texts on reproductive technologies (see for example Corea 1985a, 1985b; Arditti et.al. 1984). In these studies the patriarchal nature of the technology is expressed in vivid and highly charged language, which makes it very exciting and interesting to read. Christine Delphy (1992) provides an interesting discussion of some of the problems with these texts, especially the issue of biological determinism. She argues that they tend to repeat conservative and sexist notions of women's 'nature' in relation to biological motherhood and in this way re-inforce the myths which uphold discourses on motherhood and nature. Though these accounts demonstrate the lack of power experienced by women in organisations dominated by men they also fail to challenge the discourses of motherhood which structures women's identity and subjectivity.

The liberal feminist position on technology concentrates on the problem of access in science and computing in the education of girls. In this account technology is not gendered, the problem is one of equal opportunities rather than the gendered culture of the industry.

The feminist perspective which attempts to understand the processes and practices by which

technology embodies gender is central to this chapter. The writers in this tradition, such as, Cockburn (1983, 1985); Wajcman (1991); and Green, et.al.(1993), evaluate the historical development of cultural notions of gender and technology. The perspective developed by these writers trace how the social shaping of technology is gendered. In these studies technology is treated as a culture, rather than as a set of objects or mechanical operations. The thrust of these accounts is to demonstrate the connections between the gendered nature of technology and the growth and development of this representation. The slight differences in interpretation between these writers can be explained by the problems of joining two theoretical frameworks: the system of patriarchy and the system of capitalism.<sup>1</sup> As a recent discussion of this literature states:

The debate about the origins of the cultural association between masculinity and technology is part of a much wider set of issues concerning whether 'patriarchy' can be said to pre-date Western capitalism, and to what extent asymmetrical gender power relations are necessary to, or are part of the logic of, capitalism itself. As a whole, it can be understood as part of the engagement of feminism with Marxism, and has been particularly valuable in highlighting the (frequent) invisibility of gender divisions within Marxist accounts. (Gill & Grint 1995, p9-10)

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<sup>1</sup> These problems are discussed in chapter two.

The value of these accounts, despite the theoretical problems, is that they illustrate the extent to which technology is saturated with masculinity rather than femininity. By demonstrating the relationship between technology and masculinity this helps to explain some of the problems posed for women in the way they relate to aspects of technology. The distinctiveness of these accounts is that they are attempting to formulate a feminist strategy around technology which attempts to shift its cultural representations so that the development, design and organisation of technology will be either accessible, women user friendly and less controlled by men. The tension in this perspective can be demonstrated by the following question. Is it actually men who control women through technology or is it that the culture of technology is saturated by masculine values? In some accounts, for example, Wajcman (1991) the emphasis is on the power of masculinity in the shaping of technology. In others, as in the quote above from Faulkner and Arnold (1985), the stress is on men controlling women.

There are very few case studies of computer programming which concentrate on the gender aspects of the occupation. A short piece in *Technology Review* (1984) is indicative of a liberal feminist approach which examines the different qualities men and women bring to computer programming. The emphasis here is on the



contribution women can make to the industry and how more access to computer technology can help to increase women's representation in science more generally. The case study by Game & Pringle (1984) on the computing industry is located within a Marxist-feminist framework. The emphasis in their paper is on the impact of de-skilling for the structure of occupations in computing. They point to the predominance of women in the data preparation area, one of the least prestigious jobs in the industry and the over representation of men in the high status positions. They state that the position of computer programmer is the occupation which is most difficult to assess (1984, p87) given its position in the centre of the occupational structure of the industry<sup>2</sup>. They examine the underlying cause of the increase in the number of women programmers and the extent to which this represents the process of de-skilling and the feminisation of the occupation. Though they comment that the presence of women programmers cannot be explained simply in terms of this process, they do not develop this point in any detail. My discussion of the different programming jobs, and the segregation of women into the role of programming support rather than development which is outlined in chapter five, may help to explain the aspects of femininisation referred to by Game & Pringle.

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<sup>2</sup> See the occupation chart on page 167.

Their study then shifts to a discussion on the relationship between sexuality and the computer. They point to the representation of masculinity and machinery stating the "computer is the ultimate in machines, the giant phallus" (1984, p89). Men are represented as both sexually powerful and yet 'gauche', and this is explained by reference to men's biological sex not to gender. They state:

Men see it as an extension of the social power they are allocated through possession of a penis. Indeed they see it as an extension of the penis. And just as they regard their dicks both as supremely powerful and as playthings, so they do the computer. Simultaneously, they regard women as toys and as objects to have power over. . . . Men in computing, particularly those who work for the computer companies, seem to combine a gaucheness about sexuality with an immense capacity for objectification. (1984, p89)

There are a number of problems with this study and this conflation of male sexuality with technology. The quote implies that all men actually view technology as an extension of the phallus. This charge cannot be sustained as not only is there no empirical evidence to support such a statement but also, what is implied is that all men think and act in similar ways in relation to technology: an assumption which can only be based on biology. Rather than theorising the connection between men and technology in this way, it is important to concentrate on the discourse which permeates the culture

of technology and the implications of this for the gender technology relationship.

There is a similar problem with their tendency to conflate the terms gender and sexuality in their references to masculinity. In this account gender becomes transmuted to sexuality. Men's relationship to computer technology is connected to their sex as though through a seamless web and women are positioned as the objects of male power. The problem here is that this characterisation of the relationship between gender and technology positions women computer programmers as passive victims of male power and evades the issues of the processes and practices of gender relations in the occupation in which women have an active part. This study assumes a relationship between masculinity, men and technology which also infers a subordinate correlation between women, femininity and technology. This characterisation of gender and technology fails to develop the impact of women working as programmers on gender relations in the industry and overlooks the contradictions, conflicts and negotiations surrounding technology and gender at the workplace.

The study of computer programming by Anne Lloyd & Liz Newell (1985) points to some of the contradictions for women working as computer programmers. The article is especially valuable as the writers are both



programmers and the impetus for their writing comes from their personal experiences of the industry.

The paper begins by describing the contribution of a number of women from Lady Ada Lovelace, to the ENIAC 'girls' and Grace Hopper to the history of programming. The historical references to women and computing help to counter the myth that women are not part of the history of the industry. However the growth and development of computing after the Second World War lead to it being predominantly a male occupation. The factors which contribute to the scarcity of women's programmers is explained by the male dominated structure and organisation of the industry. The barriers facing women's entry to computing is explained by women's lack of technical and scientific qualifications and the limited access to computers at school. Though reference is made to the cultural connotations of computing, the emphasis is on the strategies used by men to exclude women. Women are portrayed as lacking in confidence around technology. This however, repeats the stereotype of femininity and does not explain how they, as women, feel confident and competent. This representation of women's relationship to technology is static and framed by a conceptualisation of gender which is linked to the sex-role theory discussed in chapter seven. This has the effect of reproducing a stereotype of women's relationship to technology: - that women are

technologically incompetent - which takes the discussion away from an exploration of the actual experiences of women who are programmers.

These contradictions can be neatly demonstrated by the remarks directed at Lloyd and Newell when they tell people (they don't say whether the comments are from mainly men or women) they are computer programmers. They write:

Women who do step out of their designated role and into the computing industry are often greeted with surprise, dismay and incomprehension. We ourselves have often been the objects of comments such as: 'You don't look like a computer person'; 'Isn't that rather an odd thing for you to do?'; 'What do you do, type things in?' and - spoken with utter disbelief - 'Heavens, you must be brainy' (1985, p246)

When I conducted my research I was interested to find out if these type of responses were a common occurrence for the women in my sample. I was also interested in trying to explore whether they experienced any contradictions and conflicts with the notion that being a women computer programmer is considered an "odd" occupation for a woman. I asked a number of questions in order to try and draw out the type of experiences documented by Lloyd and Newell<sup>3</sup>. I had deliberately left these questions towards the end of the interview as I was hoping that I would have established a degree of trust and relaxation with

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<sup>3</sup> Questions 45-54 on the interview schedule were used as a guide for this section.

the interviewee. However despite this intention, this section of the interview produced a great deal of hesitancy and confusion. One woman got very angry saying that the questions I was asking were very strange and that she could not understand why these questions were important. She said:

I dislike these sweeping statements. I don't believe the world is black and white and therefore I tend to look at people as people rather than women  
[Extract from transcripts] . . .

In particular the women did not experience any 'oddness' about their occupation. They accepted their confidence around programming easily, taking it for granted and tending to diminish the 'technical' aspects of the job and talking up the 'logical' side and problem solving elements of programming. Only two men from the sample stereotyped women's relationship with computing. They did not say that women were incapable of being good programmers rather they told me that women were not interested in computing, that they felt that women would find programming boring.

The principal response from both men and women was framed in terms of individual differences between people in relation to qualities they mentioned as necessary for the job. The most frequently mentioned qualities were logic, patience and individual effort. There were some spontaneous responses which linked technology with gender



making reference to the cultural representations of technology as male.

Well it seems that very few women choose computing as a career. I know on my course in Sunderland there were about 50 on the course and there were only about 4 women. Now I've always failed to understand why because the women on the course were equally as good and in a lot of cases better, they were all pretty good. It just seems to be a male dominated thing. I think it probably goes back to the connection people make between computers and mathematics, which is again something that men tend to go in for.

[Extract from transcripts]

Many more of the programmers did not view computer programming as technical. A very common response to this series of questions was as follows.

There's nothing particularly technical about computing. If anything it's more a logical thing, it's so you've got to be able to follow things logically. You've got to think, to do things orderly, it's a logical sort of orderly type of thing, more like . . . accounting than say mechanics or engineering if you see what I mean.

[Extract from transcripts]

There was however a number of contradictions between this assessment of programming and remarks made in other sections of the interview. Quite early on in the interview I asked questions about previous employment and education qualifications in order to uncover the routes into programming and their expectations of the job. Some references were made at this stage to the view that before they became programmers they believed that it was

a very technical job, that you have to be a 'brain box' to be a programmer, and how this assumption had been challenged by the actual process of programming. There were however no connections made between these assumptions and gender. My questioning of differences related to gender were interpreted as questions about sex discrimination rather than attempts to elicit views on the gendered culture of computer. Some awareness of this process was mentioned but only with reference to schools and college, not with reference to their immediate working environment. So, for example, they were quite happy to talk about gender and computing in relation to events that happened on their college or training courses, or as anecdotes and stories from friends in other companies but found it difficult to translate this awareness to their immediate work situation. When I pressed the issue one woman, Sam, told me:

At college, some of the females tend to sort of sit there and say, "No, I can't do it", and tend to panic rather than sit down with somebody and say, "Look can you just go over this". They tend to think "I know I can't do it", you know, "I'm not clever enough", type of thing. I found that in a couple of them, whereas the men that are on the course, if they find it difficult, they'll say "I'm having a bit of trouble with this" and they'll go and see somebody or sort it out more than the women will.

[Extract from transcripts]

There was a tendency to think about differences, not in terms of gender, but in terms of age. So the implication from the quote is that 'young' women may have experienced problems because of their gender but this is seen as a feature of adolescent behaviour which disappears when "boys" and "girls" grow up - adults behave differently. This type of reasoning was very common, with both women and men differentiating between young men and women and older people. There was however general agreement from both the men and women interviewed that a small minority of men, never women, became addicted to the terminal - "terminal addicts" one woman called them. In the literature on computing they are usually referred to as 'techies'. These are the people who spend all their working time and leisure time working with/playing with a computer. Both men and women said that they had never met a women "techie" and explained this gender difference by saying that women have more responsibilities than men, which meant they had less time to play with the computer. Thus a common response when asked about gender and computing was that yes, there are differences but these are only slight and only applies to a small number of men. So, for example, Sam (Samantha) said,

I don't think there's many in our section but certainly some will work on the computer all day at work and go home and either work or play all night on a computer and, sort of, their life revolves solely around computers. But I think as women, especially if they're, you know got commitments or family or



whatever, you know, that type of thing then they tend to leave their work more at work, simply because they have got commitments out of work.  
[Extract from transcripts]

The men mentioned a small minority of "people they know" who were terminal addicts, and said that they did not know any women who "eat and drink" computers. This was viewed very much as a very small 'extreme' minority of those working in the computing industry. The men did not extol the technical aspects of the job. Rather they repeated the remarks expressed by the women, stressing the need for logical thinking rather than technical ability. For example one man, John, admitted that he was not interested in the "technical" side of his job:

I'm not really interested in the technical side of computing. I like the business side of it. . . . I don't like anything technical at all.  
[Extract from transcripts]

He did consider that men are generally more interested in the technology than women, but this type of response changed when he began to generalise about gender and technology, as in the extract below:

I think a lot more men are more interested in the technical sort of programming side of it. I know a lot of people that are in computing, a lot of the male people anyway can get very enthusiastic about software, writing programmes, only I don't get enthusiastic about that at all, but some people do and they tend to be mostly male, the people that do.  
[Extract from transcripts]

From the interviews it is clear that the programmers distinguish between 'techies' or 'terminal addicts' and 'normal' workers, the former group, they all nominated to be a small minority of men in the industry. None of the people I interviewed were 'addicts', and though many of them, especially those in software houses worked for long hours, through evenings and weekends, they viewed this as simply the requirements of the job rather than connected to the pleasure of the technology. However there is one important difference between the responses from the men and women I interviewed. Men tended to be vague in their responses to questions concerning gender and technology as they inevitably answered these questions as though gender equals women. As I argue this vagueness is caused by men's lack of interest in women as colleagues: they were concerned with the men they worked with, not with women. The women however, answered the questions around gender and technology by rejecting the 'technical' aspects of the job. Neither they, nor the men I interviewed, viewed the technology itself as gendered. There was an awareness of gender issues in relation to the organisation's power structures and the lack of equal opportunities for women due to gender stereotyping, but this analysis was not extend to the notion that computer technology held representations of gender. On the contrary the technology was regarded as neutral.

In an earlier section of the interview schedule I asked why they liked their job and the majority of both women and men in the sample spoke of the pleasure and satisfaction they experienced in the problem solving and creative aspects of programming. The phrases "intellectual challenging", "stimulating" and "exciting" were regularly used but these expressions of pleasure were not related to the technology - the computer - rather to the status of having an occupation which was primarily mental rather than manual labour.

I enjoy sort of using my brain and being  
set something and having to sort of work  
it from the beginning to finish, having  
to think about it and decide what do I  
do here and, yes, I enjoy that side of  
it. I like to get my brain working  
[Extract from transcripts]

The majority of the computer programmers I interviewed did not view their work as technical largely because they made a distinction between the type of programming they did - that is, programming software applications and the programming involved with computer communication systems. Interestingly the few women who did programme in the area of communication systems did not regard their job as technically more demanding than programming applications. I interviewed two men who also worked with communication systems. In contrast to the women in the same area they stressed the technical aspects of the job. These men stated that they did not consider that the technical aspects of programming would



be any less difficult for women. The men and women who worked in this area of programming both stressed individual aptitude and ability over gender.

On the basis of the interviews it could be argued that one aspect of the orthodox feminist discourse on technology was supported, which is that women deny or negate the technical aspects of their jobs. It could also be argued that they do this in order to avoid the conflict this raises for their subject position as women. This subjectivity being structured by the discourse of hegemonic femininity. It was also the case that men were more inclined to stress the technical aspects of the job. However the distinction here is very slight. The majority of men I interviewed did not discuss their jobs as technical. The terms they used to describe their work was very similar to the women programmers. The interviews do not support the feminist perspective which posits men as strategically organising against women in the workplace and which argues that technology is being used as part of this project. The men I interviewed did not feel threatened by the fact the women were working alongside them as programmers. Though it was clear that men felt more comfortable than women in the work environment, they did not feel the need to prove themselves as workers in organisations. In this sense, computer programming is easier for men than for women.

Overall I was struck by the lack of acknowledgement and awareness of gender issues surrounding computing from the majority of the people, both men and women, that I interviewed. However this lack only appeared to operate with reference to their immediate workplace. As I mentioned above, they did generalise about gender stereotyping, and how men and women are viewed in the industry, but believed that they and their colleagues operated on the basis of individual abilities and attributes. It could be argued from this that the discourse on individualism which is central to the capitalist ideology of liberal democracies produces tensions and contradictions for women and men whose subjectivity and identity is also structured by the other discourses discussed in this thesis. The notion that human beings are constantly negotiating these discourses and that these discourses are fluid and not fixed or static means that there are spaces for constructing competing discourses or, if that sounds too ambitious or optimistic, there is movement within discourses so these discourses can be changed.

#### **WOMEN POWER AND TECHNOLOGY**

Elizabeth Grosz argues that the aim of feminist theorising is to construct alternative theoretical strategies and that there is a need to go beyond simply criticising either existing theory or practice. She states,

if it remains simply reactive, simply a critique, it ultimately affirms the very theories it may wish to move beyond. It necessarily remains on the very ground it aims to contest. To say something is not true, valuable, or useful without posing alternatives is, paradoxically, to affirm that it is true, and so on. (1990, p59)

By focusing on gender and technology, I want to examine the extent to which the feminist critiques on technology are constructing either theory or strategies for change, or to what extent they produce the type of negative or reactive project discussed by Grosz. The feminist critique of science and technology which stresses the male dominance of science would appear to reproduce and thus affirm the theories which it criticises, given the attribution of power and dominance to men, which characterises these critiques. The debates on gender and science have structured the debates on gender and technology, as technology is rarely discussed without reference to science. As Judy Wajcman explains:

The development of a feminist perspective on the history and philosophy of science is a relatively recent endeavour. Although this field is still quite small and by no means coherent, it has attracted more theoretical debate than the related subject of gender and technology . . . feminists pursued similar lines of argument when they turned their attention from science to technology. (1991,p1)

The feminist critique functions on a number of levels. One dimension concerns the articulation of the scientific



project: scientist's own conception of their enterprise. Elizabeth Fee in her article *Critiques of Modern Science: The Relationship of Feminism to Other Radical Epistemologies* (1986) provides a number of examples of this bias including the now infamous statement from Richard Feynman who called the idea that inspired the work for which he won a Nobel prize an:

old lady, who has very little that's attractive left in her, and the young today will not have their hearts pound when they look at her anymore. But we can say the best we can for any old woman, that she has become a very good mother and has given birth to some very good children. And I thank the Swedish Academy of Science for complimenting one of them. (1986, p45)

Moreover, the emphasis on objectivity and rationality within scientific methodology legitimates not only scientific knowledge but also men's involvement and women's exclusion from science and technology. From the emergence of modern science, science has been conceived as the control of nature. The characteristics which denote science in our culture link the high status of scientific knowledge with men and the control of nature. Men are characterised as closer to culture versus women as closer to nature. Men and science are deemed rational in contrast to women who are defined as emotional illogical, and irrational. As Weininger (1906) stated:

A being like the female, without the power of making concepts, is unable to make judgements. In her "mind"

subjective and objective are not separated; there is no possibility of making judgements, and no possibility of reaching, or of desiring, truth. No woman is really interested in science; she may deceive herself and many good men, but bad psychologists, by thinking so. (cited in Tuana 1989, pv)

The masculinity of science has not only been manifest in its conceptualisation of itself; scientific knowledge has been used to legitimate the confinement of women to the sphere of the 'natural' not simply because of mistaken male bias and lack of understanding but, according to some writers, in order to control and dominate women. According to, Cockburn (1985); Corea (1985); Hanmer (1983), (1987); Faulkner & Arnold (1985), this involves male dominance in the real sense of actual men having power and control of women, and the use of scientific reasoning and practices to legitimate this control.

For some writers, the problem of science and therefore technology would be solved by the involvement of more women in the scientific community - the 'adding women on' approach. For others, (Harding 1986; Rose 1986) the problem is much more fundamental and requires a reassessment of scientific methodology.

The issue I want to concentrate on is the link between the feminist critique of science and the feminist critique of technology in relation to male dominance and male power. In the literature on women and technology, there appears to be a borrowing of and concentration on,

the idea that technology is used by men to subordinate and control women and the conflation of science with technology. As Wajcman state; "technology, like science, is seen as deeply implicated in the masculine project of the domination and control of women and nature" (1991, p17). In order to deal with the question of power, I want to begin by providing some examples from the literature to demonstrate the notion of power which underpins the feminist critique of science and technology. For example, Margaret Low Benston in *Inventing Women* writes that:

power is the most important message that male use of technology communicates. Power over technology and the physical world is just one aspect of men's domination of this society. . . . Male power over technology is both a product of and a re-enforcement for their other power in society. Even at the household level, every time a man repairs the plumbing or a sewing machine while a woman watches, a communication about her helplessness and inferiority is made. (1992, p37)

As I indicated earlier there is a long list of books and articles which discuss women's relationship to the power of science and technology in these terms (see Corea 1985; Arditta et.al. 1984). The problem with this is that women are positioned as passive victims of male dominance and male control. Women are cast as the dominated, as powerless. "Power is associated firmly with the male and masculinity. Commentators on power have frequently



remarked on its connections with virility and masculinity" (Hartsock 1990, p157). The discourse around technology is thus shaped by these discourses on science and power. So, for example, when feminists write of 'power over our bodies', 'power over our lives', they are using the concept of power and domination which pervades the traditional discourses on power. Thus there is as Grosz argued (see above) an affirmation of this conceptualisation of power rather than the posing of an alternative. It provides little, if any, room for manoeuvre from conceptualising the relationship between women and technology in ways other than those of domination and hinders the creation of a strategy for change. The notion of power used to theorise the gender/science and technology debates imitates the traditional approach best exemplified by the work of Steven Lukes in his book *Power: A Radical View* (1974).

Power here is considered in three dimensions which characterise the exercise of power in modern society. Here it is important to differentiate between coercive power and legal-relational power, and Lukes explores the ways in which this clear cut distinction is blurred. The first dimension is "the ability of A to prevail over B in formal political decision-making (normally in government) on one or more key issues; where there is a direct and observable conflict between A and B over outcomes" (1974, p16). Power here is taken to mean the ability of one

formal office holder to shape the final outcome of government. The second dimension is defined as "the ability of A to prevail over B in determining the outcomes of conflicts of interests and also in determining what is to count as a formal issue where there is a conflict of interests over policy preferences" (ibid., p16). Here the argument is that all decisions are likely to be of importance to some group or interest in society. However some groups are strategically placed so that they can ensure that all issues which threaten them are resolved in their favour. In other words, elite groups in society either inside or outside the political system can continuously use their influence or presence in the system to determine the outcome of those issues which are important to them. The third dimension of power is defined as "the ability of A to prevent B from realising his "real interests" or from articulating them effectively due to the mobilisation of bias resulting from the institutional structure of society" (ibid., p17). In this view, power is equated not just with who decides but with the way in which the economic and social structure of modern society conditions human thought and action, so that individuals never understand their "real interests" (ibid., p17). In this formulation power can only be analysed by first asking the questions of where people's ideas of reality and their desires come from. This points one to the underlying structure of the

capitalist system which structures individual thoughts and actions such that fundamental threats to the system are not only contained, but that people are diverted from using their power to change the system. This third dimension corresponds to a Marxist analysis of bourgeois power. This approach maintains that there is a class structure in Britain made up of those who own the means of production and those who have only their labour power, and that this structure of ownership and control is reflected in not only the state but the intellectual life of a society. Here power is exercised through the state which is the instrument of those who have economic power. Parliamentary politics would be viewed as 'ideologically' significant rather than being of any fundamental significance, as it gives the illusion that people can exercise real political choices. Power is viewed as repressive, as emanating from the top downwards, either through governmental and social elites, state and or class interests. Foucault says of conceptualisations of power such as these, that:

it allows power to be only ever thought of in negative terms: refusal, delimitation, obstruction, censure. Power is that which says no. Any confrontation with power thus conceived appears only as transgression. The manifestation of power takes on the pure form of "thou shalt not" (1979, p53)

Arising from his critique of this way of formulating power in society, Foucault outlines a different way of



thinking about power. If power is always about domination posed

only in terms of constitutions, sovereignty etc., hence in juridical terms; (and) on the marxist side, in terms of the state apparatus. (Then) The way in which it was exercised concretely and in detail, with its specificity, its techniques and tactics was not looked for; one contented oneself with denouncing it in a polemical and global manner, as it existed among the "others" in the adversary's camp: power in soviet socialism was called totalitarianism by its opponents, and in Western capitalism it was denounced by marxists as class domination, but the mechanics of power were never analysed. (1979, p34).

Rather than concentrating on the negative, repressive aspects of power, Foucault argues that if this was the only story about power, it cannot explain what he terms the productivity of power. The way power "produces things . . . induces pleasure . . . forms knowledge . . . produces discourse" (1979, p36). Foucault's critique and analysis, allows a more emancipatory analysis of power which enables the establishment of a framework for examining women's relationship to technology.

Feminists have long talked about power in much more diverse ways than those discussed within mainstream academia. By talking about gender relations in terms of power, feminists put on the agenda the idea that the whole of social relationships involves notions of power. This includes the recognition that whenever two or more people are engaged in some activity, power conflicts and

struggles are involved. This means, however, that women are also involved in the exercise of power. Rather than viewing power with unease, or simply in terms of male dominance, as coercion, as a negative concept, the fact that women have and exercise power means that power cannot simply be located with men. Foucault's 'new' concept of power provides the possibility of enabling a productive discourse on power which could be used to explore the empowerment of women in ways that could be progressive and liberating. Nancy Fraser (1989) also puts forward a positive reading of Foucault on power, arguing that his analysis enables power to be analysed at the micro level, at the level of everyday practices, and turns the focus away from power as residing with the state or with the economy. Jana Sawicki (1991) makes similar points in her discussion of Foucault and power. She analyses the ways in which his concept of power differs from traditional conceptions which concentrate on power as dominance, as repression, and discusses the exercise and productivity of power in relation to identity and sexuality and the body.

In this next section I want to perform a similar exercise in relation to gender and technology. In order to begin to recast this debate, it is necessary to separate analytically science and technology. As was explained at the beginning of the section, much of the literature use the debate around science to discuss

technology. This has meant that the same restrictive analysis of power and dominance which pervades the debates on science also saturates the debates on gender and technology, and as I hope to demonstrate, both limits and restricts our understanding of technology. The principal argument for my support of Wajcman's (1991) contention that feminist analysis of science and technology need to be separated out, is that the vast majority of women have access to technology in term of use, in contrast to their relationship with science, and this means that the study of gender and technology needs to be approached differently.

If you take a long historical view you find that women were closely involved with the earliest technologies, both in terms of technique, e.g. knowledge and know-how, and design and use. The historical evidence would appear to suggest that women in Western industrialised societies, continued up to, and during the industrial revolution, to be as involved as men were with technology. Gradually they were moved out of this arena either because women were deemed to be unable to cope with technology or because women's skills were not recognised, and/or the concept of technology narrowed, so that only male activities were designated technological and women's activities and skills were devalued. It would appear than that, though Cynthia Cockburn is correct to argue that:



Technological competence is a factor in sex-segregation, women clustering in jobs that require little or none, men spreading across a wider range of occupations which include those that call for technical training (1985, p9)

This is only correct in relation to a specific historical period. It also only represents one dimension of women's relationship to technology and obscures the more complex involvement of women both historically and present day. The history of computing provides a clear example that women can take the lead in technological involvement. Women were the first computer programmers (Kraft 1977; Lloyd & Newell 1985; Wajcman 1991). These women worked in the department of defence for the American government, and in my research on computer programmers I interviewed women who did similar programming work for the British ministry of defence. It is only when the importance of computer programming was recognised and thus status entered into this occupation that the type of changes refer to by Cockburn occur. In other words it is not technological competence which is paramount as such, but the status, power and control which goes with this competence. It follows then that Cockburn is incorrect to argue that "only very recently have women begun to aspire to technical training and work" (1985, p8). The historical picture is much more complex.

Following the models proposed by Keller (1992) and Long and Dowell (1989) I would propose that technology has moved through a number of stages historically. Firstly, the craft stage, where product invention and use were designed for a specific purpose and women took part in all of these activities. This stage can be put on the long historical path from hunting and gathering societies through to the beginnings of industrialisation. Women had the techniques and the know-how. Cynthia Cockburn (see her discussion 1985, p21) would disagree with this picture, as she argues that women were excluded from craft production, but the historical evidence from Stanley (1983); Griffiths (1985), would appear to indicate that women were engaged in specific crafts and trades, and that during this stage women designed, made and used technology. Cockburn's analysis of this stage is, I would argue, based on a limited use of the term 'technology'.

Three different layers of meaning of technology are identified by MacKenzie & Wajcman (1985), (see also Wajcman 1991; Bush 1983). These are: technology as a form of knowledge; technology as a form of practice, and finally technology as physical objects. The debates on gender and technology have tended to concentrate on the first layer of meaning: on knowledge and know-how. Cockburn uses technology in this way to refer to a very specific type of technological knowledge which she terms

"essentially a transferable knowledge, profitably carried from one kind of production to another" (1985, p26). Ironically it seems that she is using a definition which refers to a later stage (applied science) where technological knowledge is exclusively the property of a small number.

During the industrial revolution a number of processes acted to exclude most women in terms of technique and use, though some historical examples are available of women who were involved in both. For example the work of Lillian Moller Gilbreth (Trescott 1983) in engineering and the first women computer programmers who work on ENIAC - Electronic Numerical Integrator and Calculator (see discussion above) could be included in this stage.

Gender and technology in the present day is shaped by the 'Applied Science' model. Essentially technology and science during this stage is controlled mainly by rich white men, which excludes practically all women and the majority of men in terms of technique, but not of use. The latter categories include the consumers and users of technology. As Cockburn writes:

women are to be found in great numbers operating machinery, and some operating jobs are more skill-demanding than others. But women continue to be rarities in those occupations that involve knowing about what goes on inside the machine.  
(1985, p11)



Many times in the literature on women and technology the role of women as 'simply' consumers and users of technology is discussed, and this is usually presented in a negative way. However if we pay attention to the historical relationship of women to technology and understand technology so as to include all three layers of meaning we can see that there is no necessary antagonism between women and technology; and that women's relationship to technology is not necessarily that of passive victims.

This historical perspective aids our project of redefining women's (actual and potential) relationship to technology via reconceptualising the relationship between technology and power. It is here that we need to make use of an alternative concept of power to one associated with control and domination.

In the light of the arguments outlined above about the micropractices of power, in terms of pleasure and control and the importance of these dimensions of power in upholding a macro level of power, it is important to acknowledge some element of personal power within the 'user' relationship to technology. For example, people who can drive a car, an aeroplane, a tractor, who can work a computer, a camcorder, a mixing desk seem to have more control, authority and autonomy than those who are unable to use these technologies. Highlighting the pleasure and power which can be exercised through the use

of technology prepares the ground for a distinct way of theorising around gender and technology which is specific to technology and marks out the distinction between science and technology.

Through the identification of technology with applied science, and a particular mode of conceptualising science, women are constructed as passive recipients of technology. In this model women don't make, control, understand technology and thus are dominated and controlled by it. This simplifies the reality of the different ways in which women relate to technology, and by encouraging this particular discourse, feminist analysis is perpetuating the myth of a female subject who is situated within the discourse of technology as a controlled and passive user.

The implication of this for a feminist analysis of technology is that a fundamental starting point needs to be the specific social interests that structure the knowledge and practice of particular kinds of technology. Incorporating the conceptualisation of power as suggested in this chapter, could provide a framework for a positive theory of power, unlike the traditional approach which views power as negative, as aggressive, as destructive, as 'male', and which excluded women's participation in the exercise of power in areas of social life.

This is not to deny the exclusion of women from the exercise of power at a macro level, or to deny the

ambiguity of Foucault's analysis of power for women. He never discussed the gendering of power, but then again according to Meaghan Morris and Paul Patton (1979), Foucault's aim was never to provide a theory of power but rather a description of the various techniques of power. From these descriptions, this 'genealogy' of power, one can extract a positive, even an optimistic discussion of power. Foucault does not dispute the coercive and repressive aspects of power but whilst accepting these dimensions, he also explores, what he calls the 'productivity' of power. As he says:

if power was never anything but repressive, if it never did anything but say no, do you really believe that we should manage to obey it? What gives power its hold, what makes it accepted, is quite simply the fact that it does not simply weigh like a force which says no, but that it runs through, and it produces things, it induces pleasure, it forms knowledge, it produces discourses; it must be considered as a productive network which runs through the entire social body much more than as a negative instance whose function is repression.  
(1979, p36)

I would argue that whilst it is true that Foucault's analysis does not provide in any way a complete or properly theorised analytical model of power which feminists can use, he does however provide a framework from which one can start to build a model of gender and power, which may help to recast the debate on gender and technology. This framework would enable the construction



of alternative feminist strategies rather than continuing to use theories of male dominance based on a notion of power which:

is limiting because it detemporalized the process of social change by conceiving of it as a negation of the present rather than as emerging from possibilities in the present. In so doing, it restricts our political imaginations and keeps us from looking for the ambiguities, contradictions and liberatory possibilities (Sawicki 1991, p86)

#### IN SUMMARY

This chapter explored the trend in feminist writings on technology which positions women as dominated and powerless rather than active and participating. I have argued throughout this thesis that this positioning of women as oppositional to men around questions of power can be traced to the concept of patriarchy and the conceptualisation of gender which flows from this concept. By conceptualising gender as a process of negotiating and resisting a number of discursive fields it is possible to interpret the contradictions and conflicts of women's relationship with different aspects of technology. This concept of gender also challenges the position that equates men automatically with power and dominance. Using Foucault's analysis of power it is possible to analyse the relations between gender and technology which not only gives women more agency in their interactions with technology but also provides a

theoretical framework from which to devise feminist strategy and policy around technology.

## Conclusion

### UNDERSTANDING GENDER SEGREGATION

The main focus for this research is to contribute to feminist theorising in the area of women's paid employment by suggesting how the meanings attached to various discourses can form part of the explanation for the persistence of gender segregation at work. Though it explores one dimension of the problem the thesis suggests an explanation for the persistence of gender segregation; shows how a variety of discourses operate to reproduce the phenomenon and illustrates how resistance and compliance can occur. The theories that explain segregation; e.g. sex role theories, human capital theory, labour market segmentation, patriarchal exclusion, and so on all explain some aspects of segregation. The usefulness and novelty of the approach taken in this thesis is that, rather than simply identify discourses, it shows how discourses work in the creation of the material reality of both gender and employment relations. Thus it broadens the topic of occupational segregation to include the impact of gender discourses on the phenomenon in order to investigate how segregation is accomplished and reproduced, demonstrating that the maintenance of gender identities is a factor in the reproduction of occupational segregation. This perspective can illuminate the practices and meanings within which women and men live, as well as point to the



active nature of occupational choices, thus demonstrating the complicated ways by which gender structures occupations. A further novelty in this study is that it explores occupational segregation in an occupation that is interchangeable by women and men unlike the majority of studies on the topic that examine how women are clustered into particular occupations.

Though I believe I have formulated some ideas that would help with any future research in the area, I think I only partly completed the task I set myself at the beginning of the project. To some extent this thesis portrays a personal route through the feminist perspective that informed my ideas for the last twenty years and is itself a product of two distinct theoretical paradigms. The first part of the work is framed by feminist-Marxism, as it was this theoretical position which informed the focus of the research through the accounts of women's work established by writers such as Cavendish 1982; Pollert 1981; Westwood 1984; Beechey 1983; Cockburn 1983, 1985; and Hartmann 1981. These accounts had emphasised the relationship between women's position in the labour market and the sexual division of labour in the house. Women workers were confined to low-paid jobs, with few opportunities for promotion, conditions which ensured their dependence on men and thus secured their unpaid work in the home. Many of these studies were concerned to demonstrate how the

intersection of patriarchy and capitalism structure women's oppression, subordination and exploitation and resulted in gender segregation at the workplace. Though this proved to be an extremely complex exercise. However the large amount of literature that resulted from this endeavour has greatly contributed to an understanding of the centrality of gender for workplace organisations. A vast amount of empirical and theoretical work about women has been accumulated. However I argue throughout this thesis that one of the cornerstones of the feminist paradigm is flawed. Largely because of the problem of essentialism that had dogged the concept of patriarchy, an attempt was made at the beginning of second-wave feminism to develop additional concepts. This lead, especially in the area of paid work, to an engagement with Marxism.

The attempt to feminise Marxism happened in a number of ways. Some writers examined traditional Marxist texts for references to women and attempted to interpret the extent to which Marx and Engels were aware of gender as an aspect of the social relations of capitalism (Vogel 1984). Others uncovered the history of women in various socialist and labour movement organizations, and outlined the contribution of these women to revolutionary politics and debates (Rowbotham, 1973). A large number of writers engaged with Marxist analysis of capitalism (Gardiner 1975, Kuhn & Wolpe 1978; West 1982), especially with the

contribution of domestic labour and women's position in the labour market to both capitalist accumulation and the reproduction of the system. These debates became paralysed by problems of Marxist economics and this effectively side-tracked any real progress in the feminist analysis of women's paid employment. This also weakened the popularity of this theoretical and intellectual position. I have tried to show that one of the problems with these accounts is related to the static concept of gender that is embedded in the analysis of patriarchy. This directs the analysis of gender away from an interpretation of the process of gendering and towards a fixed idea of gender sex roles and categories, rather than towards an exploration of gender as being continually in a process of production and negotiation. A further weakness with this tradition is that within the Marxist analysis, labour is only analysed with reference to its use as a commodity. Therefore the subjectivity of labour is not a factor in this account. However, the relationship between human beings as both subject and object in capitalist social relations means that their subjectivity will influence, shape, and interact with the social relations of production, and this subjectivity is gendered. Studying the links between subjectivity and paid labour is a recent phenomenon in industrial sociology, and is due in part to the impact of Foucault's work on the social sciences. His work provides a



critique of the unitary and rational subject that has dominated sociology. Foucault's analysis of the relationship between power, discursive practices and subjectivity provides a number of conceptual tools from which to re-examine the contradictions of women's experiences of paid work.

Undoubtedly women are objectively oppressed in capitalist society, but the processes and practices through which this occurs are complicated and contradictory for both women and men. It is extremely difficult to explain this complexity using the conceptualisation of gender that is embedded in the notion of 'patriarchy'. Although patriarchy is a concept of enormous resonance and power, - given that it points to the long historical process of discrimination and oppression suffered by women in all recorded societies, - it has become a way of expressing gender asymmetry and gender inequality, and in this sense it is a political concept for feminists on both a practical and a theoretical sense. However when used as a theoretical concept it impedes the development of feminist analysis over a wide range of topics, including some of the critical questions raised by feminist analysis of women and work. These questions converge on the extent to, and the ways by which gender shapes paid labour. The concept of patriarchy answers these questions by analysing the oppression of women in employment with reference to male

domination in the home and at the workplace. Consequently the position of women in the labour market tends to be 'read off' (Beechey 1983, p43) the sexual division of labour that operates in the household. Occupational segregation and women's role in production are explained with reference to women's reproductive role. Women's oppression both in the home and in the workplace are explained in terms of male dominance. The power, positions and roles of men tend to act as an overarching explanation for gender segregation, whether vertical or horizontal, and in this scenario, women lose their agency. The processes by which waged work becomes gendered are not analysed, but rather are obscured by the positioning of men as dominant and women as dominated. This approach is also unable to explain the contradictions and conflicts experienced by both women and men at the workplace.

Despite the fact that the concept of patriarchy has been the subject of a number of criticisms from feminists, a static conceptualisation of gender still continues to frame studies of women's employment, and this has consequences for understanding the extent to which women exercise power and control in relation to the process of gendering at work. One of the principal problems of the theorisation of gender in Marxist-feminism and also radical-feminism is that analytically women are positioned as powerless and men are powerful,

and this ignores the existence and reality of women's power. It is not the case that all men are absolutely dominant in every situation, nor does the reverse situation apply in the case of women. Just as gender is a process, so too is power, and in order to analyse gender at work and women's power as an aspect of this process, it is necessary to use Foucault's notion of power rather than the way power is conceived in both Marxist analysis and political philosophy more generally. There has been an overestimation of men's power in the workplace that has obscured the impact of their domestic commitments and interests on their subject position as men.

Male dominance is not complete whether in the home or workplace. Conventional industrial sociology and Marxist sociology had marked off the organisation of the factory as a separate area of study, and there is little consideration given to the connections between the workplace and the home on the part of men. Women's domestication of the shopfloor is stressed in ethnographic studies of women's paid labour (see Cavendish 1982; Pollert 1981; Westwood 1984) but this is represented as related to the sexual division of labour in the home and not analysed either as a demonstration of women's power or agency. Many of these accounts slide over the complications of the process of gendering in the workplace, and though women's resistance to their



subordination has been noted in all these studies this data has not been used to challenge the orthodoxy of women's powerlessness and subordination. Critiques that discuss the problems of this account of women's paid work and recognise the fact of women's power make the mistake of locating it within the family (see Grieco & Whipp 1986) rather than examining women's power at the workplace.

#### **HISTORICAL SHIFTS IN DISCOURSES OF FEMININITY**

From the historical evidence (see Bradley 1989) it is clear that the ideology of female domesticity was a critical aspect of job segregation in the workplace and that this ideology provided the basis for men's exclusionary tactics against women workers. Rather than arguing, as Hartmann does, that men actively and deliberately organised as a sex against women, I argue that because of the relationship between the discourse of femininity and the discourses of masculinity - i.e. the relational aspects of gender this meant that men's actions and practices were shaped by discourses of masculinity. Since women were restricted by the ideologies of femininity to the sexual division of labour in the household, men were also restricted to paid work. There are numerous studies that demonstrate the ideological work of gender that accompanied the industrial revolution and resulted in the historical

separation of the home and the workplace and the gendering of the public and the private. (Hall 1982, Alexander 1982, Barrett & McIntosh 1982; Poovey 1989). The responsibility and care of women and children through paid work was a vital aspect of hegemonic masculinity. Similarly the care and responsibility for children and the home were the dominant aspect of hegemonic femininity. Therefore, if we reflect on the historical evidence of men actively and strategically resisting women's presence in the workplace, this can be explained by the salience of work for the construction of masculinity for men. Poovey however point to the unevenness of this ideology, and she demonstrates what she terms:

the other face of this ideology - the extent to which what may look coherent and complete in retrospect was actually fissured by competing emphases and interests. . . . that the middle-class ideology we most often associate with the Victorian period was both contested and always under construction because it was always in the making, it was always open to revision, dispute, and the emergence of oppositional formulations. (1989, p3)

Ideologies, just like discourses, are constantly shifting, and I would argue that whilst historically the discourse of domesticity was a critical aspect of the discourses of femininity other aspects of these discourses have now become more dominant. In the contemporary discourses the emphasis has shifted from

domesticity, and the discourses of motherhood, sexuality and work now have to be negotiated by women. Historical changes have occurred within these discourses for a variety of reasons. There are two important shifts for women that have diminished the strength of domesticity in the discourse of femininity. These can be related to sexuality and equal opportunities. The debates around equal opportunities, whilst not having much practical impact in terms of women's jobs and occupational segregation, have introduced the notion of equality in relation to masculinity and femininity, and thus have implications and consequences for women's subjectivity. Sexuality has always been an important aspect of hegemonic femininity, but historically it has been relegated to the private domain, not the public. Sexuality as an aspect of feminine subjectivity was always contradictory and complex for women, but historically these contradictions were not so apparent. Thus the shift from domesticity as the signifier of women's acquisition of womanhood, of a feminine self, has exposed the contradictions and complexity of the discourses of gender for public disclosure rather than private torment. The notion of contradiction is useful here as it indicates that there are always spaces, alternatives and thus options for the construction of alternative discourses of gender. Foucault's statement about contradiction provides support for the



interpretation of my research material that refused to be interpreted by a neat and tidy analysis. He wrote:

The history of ideas usually credits the discourse that it analyses with coherence. If it happens to notice an irregularity in the use of words, several incompatible propositions, a set of meanings that do not adjust to one another, concepts that cannot be systematised together, then it regards it as its duty to find, at a deeper level, a principle of cohesion that organises the discourse and restores to it its hidden unity. This law of coherence is a heuristic rule, a procedural obligation, almost a moral constraint of research: not to multiply contradictions uselessly; to be taken in by small differences; not to give too much weight to changes, (Foucault 1972, p149)

## CONTRADICTIONS

Theoretically I believe that in order to change the position of women in society, one had to understand the process of gender and the practices that constitute femininity. Femininity, however was not constructed in the abstract. Femininity was/is constituted in relation to masculinity: the two are intertwined; one only understands what is meant, what is represented by the term women, by understanding, men and masculinity. However, the 'new men's studies' have not interpreted gender studies in this way. Rather as I discussed in chapter seven, they deal solely with masculinity and men and have failed to include women in their studies of gender. The shift from women's studies to gender

studies has also had the effect of sharpening the existing divisions inside the women's movement by strengthening antagonisms and suspicions between women who still use a women's studies perspective. Mary Evans in her article 'The problem of gender for women's studies' (1990), argues that the shift has allowed the study of differences to replace the study of gender inequalities and women's oppression; that using the concept of gender rather than women allows the unequal nature of the relationship between men and women to be disguised. In other words the shift to gender has produced some contradictory effects and these could obscure the 'fine meshes of the web of power' that subordinate women and produce male bodies and masculinities organised around control and domination.

#### **ENDING**

Giddens (1987) has argued that ideas about how societies work have a 'reflective relationship' with the social processes they seek to explain. The existing paradigm in feminist thought which is shaped by the concept of patriarchy produces a discourse that is not helpful to women. A paradigm consists of the 'orienting assumptions and conceptual frameworks which are basic to a discipline' (quoted in Acker 1989). The conceptual framework that has been used in many feminist studies of segregation has established an orthodoxy where it is difficult to perceive how change might occur. In order

to begin to change the situation for women at work, it is necessary to understand and interpret it. It is essential to grasp the process of gendering at work in order to begin to change it. This process is full complex and contradictory - but this is where attention is needed. The task of creating a new conceptual framework is immense but in order to bring about meaningful change to gender segregation at work it is necessary to begin to develop a new discourse about gender relations. Talking about gender means talking about women and men, not women or men separately. The process of gendering is constituted through the interactions of the discourses which shape gender in Western societies. Throughout this thesis I have suggested we need such an approach to the old problem of unequal gender relations at the workplace.

However there are a number of refinements that I would make if I was embarking on a similar piece of research. Some observations have been made in chapter four concerning the research method adopted in the study. It seems to me that in order to study processes and practices in the workplace it is essential to have a period of observation, preferably participant observation. It would also be useful to provide case studies of similar occupations; similar in that the occupation is interchangeable by women and men; in order to build up a sample of firms and occupations that show



the workings of the internal labour market. The extent and dimension of segregation in different occupations needs to be continually assessed in order to provide quantifiable data on the effectiveness of government legislation and equal opportunities programmes in reducing segregation. There is also a need for the collection of observational data concerning the processes of segregation and the responses of individuals and organisations to the phenomenon.

The thesis suggests that a wider remit is needed to equal opportunities policies in that simply providing opportunities for women to enter different types of occupations and enhancing promotion opportunities is only the first step in the process of reducing segregation. Equal opportunities policies and initiatives need to be coded in the language of gender as process in order to understand the dynamic that shapes the process of segregation as well as retaining the concept of gender as static in order to quantify the extent of the phenomenon. Thus in examining occupational segregation by gender it is necessary to avoid presentations of the contrast between women's and men's experiences of work and concentrate more precisely on the meanings of gendered experience. The production of case study approaches to occupations need to include information on specific personnel policies and practices in order to enable more effective policies to be developed. This would provide

the basis for political and educational campaigns, albeit in a political and economic conjuncture that is far from favourable to the prerequisite social movements that are required in order to bring about positive changes. Previously sections of the women's movement, with limited trade union support, were in the forefront of challenging occupational segregation but the weakness of feminism in maintaining an active movement concerned with work based issues has seriously reduced the possibility for serious qualitative transformations.

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APPENDIX

SOFTWARE HOUSES:

M.B.S. ALVERONIC

GENDE R	NAME	AGE	QUALIFICATIONS	LIVING ARRANGEMENTS	SALARY BAND
1.M	Lewis R	36	HND in Computer Studies	Single - living with parents -no children	£15,000 + car

RADIUS, HULL

GENDE R	NAME	AGE	QUALIFICATIONS	LIVING ARRANGEMENTS	SALARY BAND
2.M	Sylvester M	24	N.C.C. cert in Computer Studies	Single - living alone	£10,000 - £13,000
3.F	Jean D	26	HNC in computing	Single living alone	£13,000 - £15,000

CCAT COMPUTERS

GENDE R	NAME	AGE	QUALIFICATIONS	LIVING ARRANGEMENTS	SALARY BAND
4.F	Joy H	38	HNC in Business Studies	Separated with son aged 21	£15,000 + car
5.M	Robert F	36	HND Computer Studies	Single living with parents	£13,000 - £15,000 + car
6.F	Jenny S	34	BA Psychology	Separated with 2 children aged 8 & 6	£7,000 - £10,000
7.M	Paul G	32	TOPs course in computing-	Married with a baby of four months. Wife is not going back to work	£10,000- £13,000

SHIELDWORTH, BUSINESS COMPUTER SYSTEMS

GENDE R	NAME	AGE	QUALIFICATIONS	LIVING ARRANGEMENTS	SALARY BAND
8.M	Keith P	51	Refused to answer-	Married with 4 children aged 11,16 and two over 25 Wife working as manager of a night club	£10,000 - £13,000

### HODGSON IMPEY ASSOCIATES LIMITED

GENDE R	NAME	AGE	QUALIFICATIONS	LIVING ARRANGEMENTS	SALARY BAND
9.M	Steven E (Student)	21	completing a BA in Information Studies	Single living with parents	below £5,000
10.F	Ann W	31	BSC in Maths & Computer Science	Separated- no children	£13,000 - £15,000 +car
11.F	Christine O'N	26	HNC computer studies	Living with partner - no children	£7,000 - £10,000 +car
12.M	David T	42	BSc in Electronic Engineering	Married with 2 children aged 13 & 14 Wife Working	£20,000 + +car.

### IN-HOUSE INSTALLATIONS

#### RECKITT & COLMAN, HULL>

GENDE R	NAME	AGE	QUALIFICATIONS	LIVING ARRANGEMENTS	SALARY BAND
13.M	Robin L	30	TOPS course in computing	Married with 2 children (ages 5,& nearly 3) Wife has paid part time work	£10,000 - £13,000
14.F	Jean W	37	HND Busisness Studies	Divorced, living with a partner-no children	£7,000 - £10,000
15.F	Ann S	32	HNC in Computer Studies	Single Living with parents	£10,000- £13,000

### BRITISH AEROSPACE

GENDE R	NAME	AGE	QUALIFICATIONS	LIVING ARRANGEMENTS	SALARY BAND
16.F	Karen C	28	-	Married -1 child -at time of interview on maternity leave	£ 13,000 - £15,000
17.F	Tina E	22	HND In Computer Studies	Single - living alone	£7,000 - £10,000
18.F	Sandra F	29	BA Hons Business.Studie s	Living with Partner - no children	£10,000 - £13,000
19.F	Margaret A K	37	BTEC Business Studies	Married. 2 children aged 18 & 15	£10,000 - £13,000



20.F	Samantha.A. L	21	ONC In Electrical & Electronic Engineering In 2nd year of HNC in Computer Studies	Living with Partner  (Partner works as computer engineer) no children	£7000 - £10,000
21.F	Maris M	38	PhD in Biochemistry	Married - no children	£15,000 - £20,000
22.F	Carol. P	35	BTEC Business Studies	Divorced, 2 children ages 18 & 15.	£10,000 - £13,000
23.F	Gillian R	37	-Complete 3 years of Teacher Training	Divorced - no children	£10,000 - £13,000
24.F	Janet St	36	-	Married with 1 child aged 16 weeks	£7,000 - £10,000
25.F	Debbie W	25	-	Married - no children	£7,000 - £10,000
26.M	John B	27	BA. Data Processing	Single - living alone	£10,000 - £13,000
27.M	John..C	40	HNC Mech Eng	Married - 2 children wife in full time paid work	£15,000 - £20,000
28.M	George.P	49	-	Married - no children. Wife in full time paid work - secretary	£15,000 - £20,000
29.M	Graham T	36	ONC Mechanical Engineering	Married with 2 children. Wife in part-time paid work as home help	£15,000 - £20,000
30.F	Christine S	31	-doing a Part time degree in Office Systems Management	Living with Partner - no children	£10,000 - £13,000
31.F	Susan.A. M	51	BA. Maths & Science	Married stepmother to two	£13,000 - £15,000
32.F	Patricia.C. S	20	BSc Comp Sci	Living with partner - also a computer programmer - no children	£7,000 - £10,000
33.M	David B	33	BA Physics & Comp. Sci	Married with three children. His wife who use to be a school teacher is now a full time housewives .	£15,000 - £20,000
34.F	Heather K	22	HND in Business Studies	Married - no children	£7,000 - £10,000



35.F	Helen M	34	BEC National Diploma - Studying p/t BA Business Studies	Widowed with 2 daughters aged 16 & 14	£5,000 - £7,000
36.F	Jane B	29	-	Living with partner - no children	£7,000 - £10,000
37.F	Elizabeth H	49	-(computer operator)	Married with one child	£10,000 - £13,000
38.F	Margaret H	32	-	Married with one child	£7,000 - £10,000
39.F	Jane J	27	BSc - Natural Gas Engineer	Married - no children	£10,000 - £13,000
40.F	Manju M	25	BSc in Maths & Physics	Married - no children	£10,000 - £13,000
41.F	Marie-Rose S	45	-	Divorced & Remarried 2 children	£13,000-£15,000
42.F	Alison W	30	BSc. Joint Honours Pure Maths & Computer Science	Married with 1 child. Moved to part-time working	Below £5,000
43.M	C.Paul. B	36	2yres BSc course	Married - children aged 12 & 8. wife in paid part-time evening work	£10,000 - £13,000
44.M	Nick B	25	HNC Comp Studies	Single - living with parents	£10,000 - £13,000
45.M	Alan. C	27	-	Married - no children. Wife has full time paid work as a shop ssistant	£7,000 - £10,000
46.M	Jeremy S. C	29	BSc Comp Sci	Married - one child - wife not in paid work	£13,000-£15,000
47.M	Steven McC	42	HND Bus Studies	Married - no children. Wife has full time paid work as a dressmaker	£10,000 - £13,000
48.M	Ian M P	29	HND Computer Studies	Married with 1 child of 15 months. Wife looks after baby at home	£10,000 - £13,000
49.M	*Peter C	41	BSc Applied Physics	Married with 4 children. Wife works unpaid in the home	£20,000+
50.M	*J.Mike H	53	BSc Maths & Physics	Married with 3 children. Wife in part-time paid work as a cook	£20,000 +

51.M	*Mark L	53	BSc. Special Maths	Married - 2 grown up children, no longer at home. Wife now in full time paid work as secretary	£20,000 +
52.M	*Rob. W	38	BSc Computing Science	Married - two children. Wife in part-time paid work in a bank.	£20,000 +

\* Indicates Head of Department.

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Interview Schedule: Gender and Computer Programming

Interview Number

Sex

Firm/Industry

SECTION 1. JOB DESCRIPTION, TRAINING AND EXPERIENCE

Question

1. Name.....
2. Age.....
3. What kinds of qualifications do you have?  
Specify
  - O'Levels
  - A'Levels
  - Certificate
  - Diploma
  - Degree
  - Masters
  - Doctorate
  - Other
4. What was the nature of your father's employment?
5. What was the nature of your mother's employment?
6. Have you had much training since leaving college?
  - Day Release
  - Evening Classes leading to qualifications
  - Recreational Evening Classes
  - Other
  - None
7. Can you tell me what jobs you have had between leaving school and starting here, mentioning times you have been unemployed or at home.
  - (a) Number of jobs .....
  - (b) Employment Type
    - Full Time
    - Part Time
    - Temporary Full Time
    - Temporary Part Time
    - Contract
    - Freelance
    - Other

(c) Length of employment in jobs.

1st Job  
2nd Job  
3rd Job  
4th Job

(d) Reasons for leaving previous employment

Increased salary  
Better Job Prospects  
Job Satisfaction  
Better Hours of Work  
Promotion Barriers  
Domestic Reasons  
Other

8. Can you describe your present job?

9. What type/kind of computer programming does it entail?

10. How many hours a week do you work?

11. Can you describe the amount of responsibility you have at work?

12. Would you like more responsibility?

13. Why/Why not?

14. Can you describe the amount of autonomy/control you have in your job?

15. Would you like more autonomy /control?
16. Why/Why not?
17. What would you consider to be your main reason for doing your present job.
- Good career prospects
  - Like it
  - Money
  - Only Job Available
  - Friends
  - Fits in with children
  - Fits in with partner
  - Other
18. How would you rate your job?
- Rewarding
  - Challenging
  - Satisfaction
  - Good Company Benefits
  - Intellectually Stimulating
  - Other
19. Can you give me some idea of the salary range of your job?
- Below £5000
  - 5000 - 7000
  - 7000 - 10000
  - 10000 - 13000
  - 13000 - 15000
  - 15000 - 20000
  - 20000+
20. How would you describe the amount of stress in your job?
21. Do you think you/women experience any particular difficulties with this type of job?



22. Do you think about getting another job?
23. Why/Why not?
24. Do men and women do the same jobs in this area of work?
25. If not, what jobs do men do?
26. If not, what jobs do women do?
27. What kinds of staff development/training are available at work?
28. What kinds of promotion possibilities are available?
29. Have you /or are you looking to be promoted?
30. Why/Why not?

SECTION 2. LEISURE/OUTSIDE WORK ACTIVITIES / FAMILY SITUATIONS

31. Do you have any/many leisure persuits/activities?
32. What types of leisure activities or hobbies?
33. Do you go to any evening/educational classes?
34. What types of educational activities?
35. Are you a member of a trade union?

36. Can you describe your marital status, i.e. are you,
- Married
  - Living with partner
  - Single
  - Separated
  - Divorced
  - Widowed
  - Other
37. Who do you consider to be the main bread winner in your home?
38. How many people/children do you share a house with?
39. What kind of childcare arrangements?
40. How many hours of childcare do you reckon you do in a week?
41. How many hours of childcare do you reckon your partner does a week?
42. How many hours of housework do you reckon you do a week?
43. How many hours of housework does your partner do a week?  
If any?
44. Future prospects/plans.
45. Do you think women/men have different attitudes to computing?
46. If yes - Can you describe these attitudes.

47. Why do you think such differences exist?
48. In your experience do you think men/women have different attitudes to work?
49. If yes - Can you describe those attitudes.
50. Why do you think such attitudes exist?
51. Do you find differences between men in relation to computer programming?
52. If yes, could you describe and explain these differences?
53. Do you find differences between women in relation to computer programming?
54. If yes, could you describe and explain these differences?
- .
- .